

American Aviation

The Independent Voice of American Aeronautics

JANUARY 1, 1946

Air Power in Peace

IT IS NOT EASY to sell or scare the majority of Americans into a peace-time program of taxation for combat air power. Yet all thinking Americans realize that this country must be strong in the air.

The national problem today is how to continue to keep the United States foremost in the air and yet satisfy the average citizen that he is getting real value for his money instead of seeing his money expended for "practice war."

The solution may be found in the same formula by which our aviation was developed in the lean years when our military air forces were starved for funds. It was the formula by which commercial aviation was the "proving ground" for the military—it was the formula by which manufacturers were stimulated to build seats for passengers in the early mail planes and by which air transport companies were paid additional funds for two-way radio and other advanced features of air transportation.

American air power in the prewar years was developed largely through methods which gave the taxpayer a break. It can be maintained in the future through the same method. There is nothing to indicate that the American people will continue to pour out vast sums for pure military strength which has no other objective than stand-by power. The emotions of war are over.

In short, what we need from now on is convertible air power—air power that has public benefits but which has its roots in national defense. And in achieving this goal the Air Power League can play a very important role.

How can this convertible air power be obtained? Simply by making it possible for the air transport companies to broaden the base of their activities from that of a purely commercial operating economy to a base embracing more scientific and research cooperation, more maintenance and operating capacity, pilot training and skill, experimentation—and better service to the user of the mails.

The man who buys air mail or first class postage can receive not only an improved mail transportation service but a dividend, as well, in stand-by air power. The commerce of the nation can be speeded up by faster and better-timed mails. The Army and Navy will benefit tangibly by having the airlines as proving grounds and testing laboratories as they were before the war.

(Turn to page 6)



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C. E. Woolman, operating head of Delta Air Lines for 20 years, has been promoted from vice president and general manager to president and general manager. C. E. Faulk, president since 1935, has become chairman of Delta's board of directors.

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American Aviation

Volume 9, Number 15

The Independent Voice of American Aeronautics

January 1, 1946



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Daniel S. Wentz, II
Transport

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West Coast

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American Aviation Daily: The only daily news service for the aviation industry. Published daily except Sundays and holidays since 1939. Dispatched via airmail or surface mail for overnight delivery in the United States. Subscriptions: \$15 one month, \$170 one year. Airmail delivery to points outside the United States at additional cost to cover postage. Service Bureau available to all subscribers. CLIFFORD GUEST, Managing Editor.

International Aviation: A weekly newsletter of aviation trends and news in foreign countries. Published on Friday of each week and dispatched via first-class surface mail. Editorial representatives in foreign capitals. Subscriptions: \$100 one year (12 issues). Airmail delivery available at additional cost to cover postage. Service Bureau available to all subscribers. FRANK M. HOLZ, Managing Editor.

American Aviation Directory: Published twice a year, Spring and Fall. Complete reference data on administrative and operating personnel of airlines, aircraft and engine manufacturers, accessory and equipment manufacturers, organizations, schools, U. S. and foreign aviation groups and departments, etc. Completely cross-indexed by companies, activities, products and individuals. Single copy \$5.00; annual subscription (two consecutive editions) \$7.50. Spring-Summer 1945 issue now available. HELEN L. WALSH, Managing Editor.

American Aviation Traffic Guide: Monthly publication of airline schedules, rates and regulations for passenger and cargo transportation by commercial air transport. Supplements furnished subscribers covering changes occurring between issues. Subscriptions U. S. and Latin America \$5.00 one year (12 issues and supplements); Canada \$5.50. All other countries \$6.50. Published and revised from editorial offices at 139 North Clark Street, Chicago 2, Illinois. (Telephone: State 2154). H. B. WHITNEY, Managing Editor.

American Aviation Reports: Current financial and traffic statistics on all domestic airlines as reported to the Civil Aeronautics Board. Includes monthly and semi-annual summaries. Yearly subscription comprises over 500 separate reports. \$175 one year; \$100 six months; \$20 one month. Special statistical and research work for subscribers at cost.

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(Continued from page 1)

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General H. H. Arnold, chief of the Army Air Forces, said in a National Press Club address early in December, "The airlines today are as much a part of air power as is the bomber and fighter." He pointed out that the administrator, scientist, and mechanic, as well as the pilot, were all dominant elements in the new conception of air power. He said, "We must keep close contact with industry so that there may be a great opportunity for the interchange of ideas." And he well might have added that we must find a way in peace-time economy to pay for what we need.

If we want American air power to continue to be great, we shall have to do some original thinking about a proper approach to the American public. Let's not be so naive as to think that the average citizen has changed. He paid for no military airplanes for some years after the end of World War I. He will turn again to the education of his children, improvements for his shop or farm, repairs and new earning equipment. "Foreign affairs" will seem very far off. But he will help our professional fighters get much of the knowledge they need if he can do it through his purchase of air mail or first class stamps.

If the instruments of air power in war can be used to speed communications and transportation in peace there is no doubt that all persons interested in human freedom can work together for the ideals which we, as Americans, believe firmly to be right. The Air Power League has its mission mapped out.

Give It A Chance

SENATOR PAT McCARRAN has re-introduced his bill which would create a single monopoly international airline for the United States. It is most improbable that the bill will make any progress in the present session of the Senate but it does indicate that the single-company advocates are not giving up the fight against the multiple-carrier policy in the foreign field.

It seems to us that the Senator's bill is most untimely and demonstrates more than anything else the Senator's failure to recognize the changed picture in international aviation. Most certainly it demonstrates that he has not given the international picture his personal attention and his personal investigation.

In the early days of air transportation it was the government policy to stimulate the development of

airlines by means of air mail pay. In the early days this air mail was really an outright subsidy and admittedly the pioneers should get credit for building and expanding our airlines both domestically and internationally. Although the public paid for their development through air mail pay, there was a certain risk to capital in this new form of transportation.

Out of this prewar development came mass air transportation within the United States. If our domestic airlines started some years behind European airlines they caught up in fast order and by the time the war began they were well apace of the concept of air transportation which was understood in other countries.

Now we are well into the postwar era and the same type of mass air transportation enjoyed within the United States is beginning to get underway in the international field. And Senator McCarran has small understanding indeed of the problems, the outlook and the possibilities for international air transport if he believes that any one set of brains in this country is capable of exploiting sufficiently and efficiently the promising international field in the name of the American people.

It cannot be said of any single airline company, or of all of them, that they are "pioneering" air transport internationally today. In Europe, especially, the American public is going to have efficient American air transport available to him largely because of the tremendous outlay in communications and other facilities as a result of the war. International air transport is in the public realm, but competition is most assuredly needed if we are to take advantage of the multitude of opportunities now open to us. One company, whether it be private, government, community or whatnot, is not capable of doing the job.

The element of "competition" has been over-rated in the development of three U. S. carriers eastward to and through Europe. In all but a very few spots, each company has its own field to exploit. And the field of opportunity is great enough to match the best brains of each company and it would be travesty, indeed, to believe that any one company could serve adequately our traffic to Scandinavia, to the United Kingdom, to France, to the Iberian Peninsula and to the countries to the east.

There has been a lot of talk about "mass transportation" but despite all the talk there is only one way, in all sincerity, by which this goal can be achieved. It is through putting the best efforts of three companies to work in developing airlines to Europe. Senator McCarran, we believe, is guilty of a vast amount of misinformation on international air transport and if he is sincere in wanting to press for his single-company bill, he should first give the established multiple-company policy of the United States a chance to prove itself, and secondly to base his pleas on actual personal investigations rather than the out-dated and quite academic arguments which he has been using.

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THE CIVIL AIR WAR. By C. G. Grey. Harborough Publishing Co. Ltd., Allen House, Newarke Street, Leicester, England. 212 pp. \$2.50.

C. G. Grey, former editor of *The Aeroplane* and well-known British aviation writer, has written a book that is certainly not designed to meet with the approval of American readers.

The first part of Mr. Grey's book deals with some of aviation's history, while the rest half concerns the international air transport war and Britain's own aviation troubles. This last half, the author remarks, is "more political and therefore much funnier." American readers may not agree.

Throughout the book Grey makes a questionable "analysis" of U. S. planes. "We were buying aircraft from the United States, not one of which was warworthy and all of which had to be modified when they got here to make them usable," he claims. And, there are even people here who have admired U. S. aeroplanes, while I have been mentioning that all those fine, clean-bred, recent-living young Anglo-Saxons from the USA have been sacrificing their lives over Germany in aircraft which were definitely not warworthy." Later he says, "Here are we admitted by everybody to have the finest air force in the world, the best war machines and the best-trained and skilled pilots, navigators, bomb-aimers, gunners and ground crews." And still later: "Right through the war the best British aircraft in each category, from the fastest fighter to the biggest lumber, was always better than the best in the same category belonging to any other nation, whether enemy or allied."

Near the end of the book comes the startling statement that "... the Avro York ... has proved itself to be a better job than the much boosted so-called 'Skymaster' or Douglas DC-4 ... So I cannot see any U. S. air transport machine which was as good at the beginning of 1945 as were the Yorks and I cannot foresee any U. S. transport machine which is likely to be better in 1946 than the machines which we shall have then."

With these not-too-accurate statements, and others in the book, U. S. readers will take issue.

Another startling revelation made by Grey is that Britain was afraid to announce its postwar air transport policy in 1944 for fear that the U. S. would cut down Lend-Lease supplies. He proceeds to hearten U. S. readers by stating that "... we cannot keep their airplanes off our routes by legislating in our own favor. So let us go back to the good old English way, and say, 'Let 'em all come,' and then push them out of the air by giving the users of air transport what they want above all else—safety, speed and service." However, several pages later, he changes direction and says: "Naturally, we have all the best bases, we expect something in return from the United States. Which I take it means that if U. S. airlines are going to operate all over the British Empire, British airlines ought to be allowed to operate all over the United States." Grey obviously forgot that operations "all over the U. S." would be cabotage, which all nations reserve for their own airlines, while operations between Britain and various parts of the Commonwealth are not cabotage.

Nevertheless, Grey insists that "... as between the United States and ourselves I feel that we can carry on an air transport war in the most friendly spirit, always remembering that 'win, tie or wrangle' has been the U. S. motto in sport and business since such things began."

It is too bad that Grey's book was published before the recent statement of British air policy in Parliament, announcing nationalization of airlines. Throughout his writing he decries "monopolistic" and "national

socialist" practices in air transport. Had he waited, he could have been even more vitriolic.

Despite the fact that U. S. readers will not agree with most of Grey's ideas, *The Civil Air War* is interesting reading if you do not take it seriously.—E. B.

A DICTIONARY OF AERONAUTICS With Glossaries of Aerological and Navigational Terms. By Edward B. French. Mentzer, Bush & Co., Chicago. 129 pp. Illustrated. \$1.00.

A small volume containing brief definitions of essential terms in every day language and priced to reach all; author is associate instructor in Navy Dept.; number of illustrations are limited and some not too clear; format similar to school dictionaries; pronunciation given for words whose pronunciation is not apparent; one slip-up on alphabetizing noted.

WINGS OVER THE DESERT. By Graham M. Dean. The Viking Press, New York. 224 pp. \$2.00. Illustrated.

A story of the Civil Air Patrol, with authentic background, in which a cub reporter, physically unfit for the Armed Service in World War II, becomes involved in attempted sabotage, pulp-forest fires, rescues, and a long series of other unusual adventures.

ARNHEM LIFT. By Sgt. Louis E. Hagen. 32 pp. Farrar & Rhinehart, New York, 1945. \$1.00.

A short, personal narrative of the Arnhem action, September 17 to September 25, 1944, by a German-born British glider pilot.

AIR-AGE GEOGRAPHY AND SOCIETY. By James Franklin Chamberlain. Revised edition by Harold E. Stewart. 717 pp. Lippincott, Chicago, 1945. \$2.12.

A high school textbook with emphasis on global perspective. Revision of "Geography and Society."



'Why Go to Berlin?'

To the Editor:

Quoted in an excerpt from your issue of December 1st, on page 48 under the title "Airports" from Berlin regarding Templehof Field. (By W. W. P. wasn't it?)

"Currently the big airport is being run by rank amateurs who ought to be shipped back to the States and replaced by competent personnel. Not only are they inexperienced in aviation and airline matters, but they are arrogant, petty, childish and underdone youngsters who comprise an outstanding disgrace for the American Army in Berlin. What they have cost the Treasury by closing the airport under almost ideal weather conditions is hard to estimate but when an army major sends a 10,000-hour airline pilot back 250 miles and holds him there for four days by keeping the airport 'closed,' it's time to clean house and ship the numskull back home."

To which I say "Amen" and "God bless him." But why did he have to go all the way to Berlin to find this condition. He should go out to his own Washington Airport or any other busy field early some smoky morning and watch the wheels of U. S. aviation progress grind backwards. He could frequently see not one but several 10,000 hour airline pilots circling, with the field in plain sight, their years of flying experience completely nullified simply because some little girl with a few weeks training as a weather observer can't see a certain landmark from her point of observation. The field is below minimums simply because she can't see. The fact that from the cockpit, from where the airplane must be landed, the visibility is unlimited, or at least adequate, is of course of no importance.

Landings may be made it is argued under

Wings of Yesterday

Twenty-Five Years Ago

Eduardo Chaves, of Sao Paulo, Brazil, flew a Curtiss "Oriole" twelve hundred miles between Rio de Janeiro and Buenos Aires, winning the \$25,000 prize offered by the Brazilian government. (Dec. 28, 1920).

Two U. S. Navy F-5-L and two N. C. flying boats left San Diego, Calif., on the start of a long flight to Balboa in the Panama Canal Zone. (Dec. 30, 1920).

The War Department established flying boat mail service between the larger towns in the Philippines. (Jan. 1, 1921).

A U. S. Navy Seaplane, N.C.-5, carrying six persons, made a non-stop flight from San Diego, Calif. to Magdalena Bay. The distance of 762 miles was covered in nine hours, 15 minutes. (Jan. 1, 1921).

The British Air Ministry authorized subsidies of sixty thousand pounds for civilian aviation for 1921 and 1922. (Jan. 1, 1921).

Wright Aeronautical Corp. changed the name of their improved American Hispano motor to Wright Engine. (Jan. 1, 1921).

New Zealand established a new Air Mail Service, modeled after the U. S. Air Mail. (Jan. 3, 1921).

The Aeromarine Engineering & Sales Co. was made the distributing agent for \$4,000,000 worth of U. S. Navy surplus aircraft and engines. (Jan. 7, 1921).

Fifteen Years Ago

Evelyn Trout and Edna May Couper established the women's refueling record of 123 hours, at Los Angeles, Calif. The plane flown was a Curtiss-Robin, Curtiss Challenger motored. (Jan. 4-9, 1931).

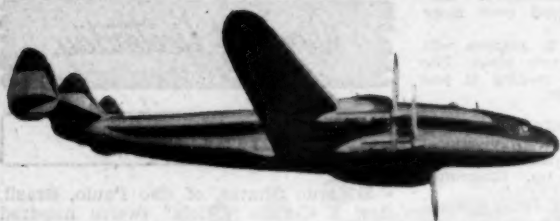
On an attempted transatlantic flight, Mrs. Beryl Hart and Lt. William S. MacLaren were lost between Bermuda and the Azores. They were flying a Bellanca CH-300 seaplane, Wright Whirlwind motored. (Jan. 7-10, 1931).

these conditions by declaring an emergency. Nuts! Why declare an emergency when none exists? It means writing a letter and quite possibly attending a hearing to justify your action.

The solution: Simple. Let the operators quit squabbling over routes, and a pound saved is \$500 earned, running up stall speeds, etc. long enough to insist on some sensible regulations being written so that the judgment of a man they have trained and are paying to do a job, and who has the ultimate responsibility, is used instead of the judgment of people all too frequently of the type so adequately described in your article. That would keep thousands of dollars from going down the drain, improve service and increase safety.

It's past being ridiculous, it's now serious. I am glad W. W. P. had a chance to see the ultimate in nonsense.

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PAN AMERICAN WORLD AIRWAYS

PAN AMERICAN-GRACE AIRWAYS (PANAGRA)

TRANSCONTINENTAL & WESTERN AIR (TWA)

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Lockheed Aircraft Corporation, Burbank, California, U.S.A.



Trend of

(As compiled and edited by Clifford Guest,

CAB and the IATA Conferences: With the North Atlantic traffic conference of the International Air Transport Association set for Jan. 8 in New York to tackle the delicate and complex question of what international air fares should be recommended, there has been much speculation in recent weeks as to what the Civil Aeronautics Board would have to say about the set-up of IATA traffic conferences. CAB approval is necessary for U. S. carriers to participate.

While it was recognized a year ago at the Chicago international civil aviation conference that fares and related questions should be handled on the operators' level, the recent U. S.-London fare disputes have put them in a different light. In fact, Pan American has indicated in press releases that it will not go along with anything higher than its proposed \$275 fare when IATA acts. Nub of the situation is that IATA recommendations must be unanimous.

These factors have resulted in talk that the Provisional International Civil Aviation Organization might have to take a hand in international rates. However, this in turn would require treaty action—a long drawnout process at best. The airlines have been awaiting a formal expression from CAB as possibly throwing some new light on the situation.

LeMay Will Head AAF Research: Creation of a new staff section at Army Air Forces headquarters to coordinate all research and development, with Maj. Gen. Curtis E. LeMay in charge, was one of the interesting developments of the past fortnight. The purpose of the new staff agency is to coordinate all research in the field of military aviation between industry and AAF engineers with the intention of keeping Army aviation development progressively advanced in all fields of research. This recognition of industry's help is important. The Army recognizes General LeMay as one of its most experienced development leaders.

Bilateral Negotiations Progressing: The rapidly expanding international phase of U. S. aviation will go into the first full peace-time year with the stage set for what looks like early conclusion of reasonably satisfactory bilateral agreements with a number of important foreign countries.

A satisfactory French agreement had been close to signing for several weeks, but at press time it remained to be seen whether the transatlantic passenger fare developments would have any effect on it.

Here is how the picture shaped up during the fortnight with other countries: Talks have been held with the Belgians, but the outcome was uncertain because the Belgians are concerned about rates. Czechoslovakia, Turkey and Switzerland were said to be close to signing. Talks with Greece have been complicated by a request that on Fifth Freedom traffic the U. S. carrier pay a 25% fee on all passengers carried farther than 700 miles. Egypt has granted provisional rights pending signing of a bilateral agreement. No difficulty is anticipated in securing provisional rights from Iran and Iraq. Talks with India are in an early stage. Officials believe the sight of U. S. planes on survey flights covering some of the foreign countries will convince them we are ready to operate, and will expedite signing of agreements.

Lockheed Claims 'Extras' for Airlines: When the Lockheed Constellation was certificated by CAA for a gross weight of 90,000 pounds, Lockheed officials were able to claim several "extras" above what they had promised purchasers of the commercial transport. For instance, they had guaranteed that the C-69 could land at 73,000 pounds, whereas it actually can land at 75,000 pounds, at 80 mph. Tests showed, they said, that it could actually land in less runway distance than the DC-3. A better lift coefficient than promised also was claimed.

Lockheed expects to start delivery of its "gold plate" Model 49 version of the Constellation sometime in April.

The News

Managing Editor, American Aviation Daily)

'Morrow Board' Bill Handicapped: Aviation industry reaction to the bill introduced by Sen. Hugh B. Mitchell (D., Wash.) for creation of a National Air Policy Board—comparable to the old Morrow Board which did much for aviation in the years after the first World War—has been dampened considerably by the broad and probably controversial scope of the Mitchell bill. The industry, generally, would rather see the objectives of the Board limited to the development of an adequate national policy on air power and what is needed in industry and government to see that we are able to maintain that policy, instead of losing ground as was done after 1918.

Objectionable are such sub-titles as that providing for study and legislation "dealing with the coordination, strengthening, and preservation of a national transportation system by water, highway, rail and air adequate to meet the needs of the commerce of the United States, both interstate and foreign." It is feared that this will throw the Mitchell bill into the old arena of "integration" battles, leading to interminable hearings and obscuring the real "Morrow Board" objective.

The ICC Issue Arises Again: The trucking industry has under consideration a move to get from under the jurisdiction of the Interstate Commerce Commission and have Congress set up a separate regulatory body for the industry. The decision whether such a move shall be made is to be taken at the annual industry convention in January. Aviation generally probably would support the trucking industry in such a move.

There are fears in a wide segment of aviation that the government reorganization bill recently approved by Congress might open the door to transfer of the CAB and its functions to the ICC. Opinions are not unanimous—one of the big airlines, in fact, thinks it might be a good thing. Most observers feel that the decision of L. Welch Pogue to remain with CAB for the present will help offset any Administration ideas about transferring it to ICC.

Change in Steamship Tactics: If steamship interests are unsuccessful in getting international air transport routes through pending proceedings before the Civil Aeronautics Board, a change in their strategy may be expected on Capitol Hill. Surface interests generally were successful in blocking consideration of the Lea CAB Reorganization bill in the last Congress but at the same time they lost an opportunity to have their own case argued and decided. This time they may permit CAB Reorganization bills to go to the floor under an open rule which will permit surface carrier amendments to be considered.

Short Aviation Observations: Goodyear Aircraft Corp. officials say the company definitely intends to stay in the aircraft business—that it has bid on two jet jobs and that it still is engaged in two research projects for the Army and Navy. . . . Goodyear is closing its Arizona division at Litchfield Park where modification work has been completed. . . . Navy may take it over for an air base. . . . CAB probably will announce shortly the setting up of the final case in its series of regional feederline proceedings, consisting chiefly of applications for routes in Arizona and New Mexico, the only areas not touched in previous cases. . . . A navy blimp was scheduled to be used over Pasadena Jan. 1 to assist in the handling of traffic for the Tournament of Roses. . . .

American Overseas Airlines new wage agreement is described by Charles H. Kerrigan, regional director UAW-CIO, as "the best one now in effect for airline workers in this country." . . . The one-year contract provides for no lockouts on the part of management and for no strike on the part of the workers until all procedures of both the contract and the Railway Labor Act have been exhausted. . . . ODT Chief J. Monroe Johnson recently has renewed his campaign for a permanent government agency for the regulation and control of transportation in all fields. . . . He'll go back to ICC in about six months and presumably will continue his advocacy for such control. . . .



Artist's conception of Idlewild airport when all runways and taxiways are completed, superimposed on aerial view of site.

New York's Idlewild is paved with CONCRETE

Runways and taxiways for New York's famous Idlewild Airport are designed to carry planes weighing up to 300,000 pounds. The concrete runway slabs are 12-in. thick, 200 ft. wide and up to 10,000 ft. long—taxiways are 14-in. thick and 100 ft. wide.

Idlewild is a preview of the type of construction required in major airports to safely handle giant planes of the future.

Portland cement concrete is the ideal material for major airport construction because concrete pavements can be designed as engineering structures with the strength needed to carry the wheel loads of modern planes. Such concrete pavements usually cost less to build than any other pavement of equal load-carrying capacity.

The low first cost of concrete, its low maintenance expense and long service life—give low annual cost—the true measure of pavement economy.

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GREAT CITIES LIE ALONG THE MAIN LINE AIRWAY

Chicago, "The Great Central Market," seven-billion-dollar industrial and commercial giant, is one of 53 cities on United's Main Line Airway. With additional planes, including 4-engine Mainliners, to be in service soon, United offers travelers fast, fine service—at new low fares—from coast to coast over this straight, strategic route—the route that goes where business is.

← Michigan Avenue, Chicago, looking toward "The Loop."

United Air Lines has been presented an Award of Honor by the National Safety Council for having flown more than a billion passenger miles in the past three years without a fatal accident. We are proud of our flight personnel and ground employees who made this record possible.



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American Aviation

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This Issue

Aviation Interest Focuses on Congress

Apparent That Industry Plans to Start Pushing Legislation During Early Months of New Year

By GERARD B. DOBBEN

U. S. civil and military aviation will focus much of its attention on Congress during the early months of 1946.

Postwar military policy which will determine the size of this country's peacetime Army and Navy air establishments and fix the amount of funds that aircraft manufacturers may expect for military production should be greatly clarified by the time the new budget year and the new appropriations become effective, July 1, 1946.

There is evidence that the aviation industry plans to start pushing aviation legislation soon after the Congress convenes. Congressional inertia has been holding up indefinitely the start of one of the most important postwar public works programs that has been suggested—the building and improvement of some 3,000 airports as envisaged in the National Airport program. Federal Aid airport bills, after passing both House and Senate, have been bogged down for nearly two months in a conference committee deadlock over the channeling of funds. This delay is serious when it is realized that at least 18 months will elapse between the final enactment of this legislation and actual beginning of construction under the program, due to preparation of plans, estimates of cost and the time needed for carrying out all of the legal procedures that are involved.

The growth of civil aviation is linked to airport development. Hence the aircraft manufacturing industry, as well as all of its correlaries, is watching the Federal Aid Airport legislation closely.

Many industry observers feel that the Appropriations Committees of the House and Senate, through their responsibility in conducting the hearings and reporting out the annual appropriation measures, will go a long way toward fixing military air policy before overall studies of this country's peacetime military air force needs can be completed and their recommendations written into law.

Not Too Favorable Situation

This is regarded as a not too favorable situation because these two committees have given some evidence of making arbitrary and percentage wise cuts in requests for funds in an effort to accomplish their overall objective of bringing the budget somewhere close to a balance with tax income. One illustration is provided in the fact that 14 members of the House Appropriations Committee voted against the Federal Aid Airport bill when it passed the House. After the bill actually becomes law, the Appropriations Committee will have to pass on the size

of the appropriations, which under the language of the House bill, is discretionary "up to \$100,000,000 a year."

Because House and Senate have not yet accomplished much toward putting machinery in motion for creation of an air power policy board which would do the job which the Morrow Board did following World War I, the immediate peacetime future of the air arms of Army and Navy will be quite largely determined by the actions of the men who write the Appropriation bills that must be passed before June 30, 1946.

The airlines, through the Air Transport Association, expect to do considerable work on Capitol Hill this year. Robert Ramspeck, newly appointed Vice President of ATA and former Majority Whip in the House, will devote considerable time to legislation matters.

Lea Bill To Be Considered

That basic legislation dealing with both U. S. domestic and international aviation will receive attention early this year can be seen from the fact that Rep. Clarence F. Lea (D., Calif.) has indicated that the committee's subcommittee on Aviation will consider soon his bill which would establish an independent Civil Aeronautics Commission and the Office of Director of Air Safety to investigate aircraft accidents. This bill has been printed and probably, after consideration, will be introduced as a committee bill.

The bill follows generally the outline of policy and principle enunciated in H.R. 674 which Rep. Lea introduced Jan. 4, 1945. This was called the omnibus bill because it covered various phases of aviation, including the Federal Aid Airport program. Because some of the matters covered in H.R. 674 were highly controversial, Rep. Lea decided not to press for action on it but instead introduced a separate bill to cover only the Federal Aid Airport Program.

If Lea's new CAB bill is reported out favorably, another fight may be expected in the House Rules committee over the surface carrier issue. The Rules Committee probably, on the basis of previous action, will attempt to write in an amendment which will give steamship companies and possibly bus and railroad companies the expressed statutory right to operate air services.

There are those on both sides of this issue who feel that no fundamental aviation legislation will find its way to the floor of the House until this issue has been settled once and for all by a vote in Congress. If this issue is not settled, only those aviation bills designed to accomplish a specific, generally non-contro-

Aviation Calendar

Jan. 4-6—All American Air Maneuvers, Miami, Fla.

Jan. 7-11—SAE annual meeting and engineering display, Book-Cadillac Hotel, Detroit.

Jan. 8—LATA North Atlantic rate conference, New York.

Jan. 10-11—Iowa-Nebraska Air Age Institute, University of Omaha.

Jan. 11-20—Indoor aircraft show in Public Hall, Cleveland, auspices Cleveland Aviation Club.

Jan. 12-13—Dedication of New Orleans Moisant Airport.

Jan. 21—FICAO Council reconvenes, Montreal.

Jan. 21-23—Northwest Aviation Planning Council, Boise Hotel, Boise, Idaho.

Jan. 29—IAS Honors Night Dinner, Waldorf-Astoria Hotel, New York.

Jan. 29-31—IAS Annual Meeting, tentatively scheduled for Pupin Laboratory, Columbia University, New York.

Feb. 12—LATA European Rate Conference, Paris.

Feb. 21—LATA Middle East Rate Conference, Cairo.

Feb. 26-28—ATA Engineering and Maintenance Conference. Place not set.

March 1-5—Pan American Aircraft Exposition, Dallas, auspices Chamber of Commerce.

March 4—North Atlantic Regional Conference of FICAO, Dublin, Ireland.

March 8-16—Southwestern Aviation Exposition, Fort Worth, Tex.

April 3-5—SAE National Aeronautic Spring Meeting, Hotel New Yorker, New York.

July 19-20—NAA National Convention, Omaha, Neb.

Oct. 14-17—National Aviation Clinic, Oklahoma City.

versial purpose have much chance of serious consideration.

Two such bills were introduced by Rep. Alfred L. Bulwinkle (D., N. C.) one of which, H.R. 164, would authorize an investigation of causes and characteristics of thunderstorms, the other, H.R. 1814, would provide for improvements in international collaboration with respect to meteorology. Still another bill by Rep. Bulwinkle, H.R. 3446, designed to prevent multiple taxation of air carriers, may receive early attention.

Another bill, H.R. 3383, introduced by Rep. Lea would define Federal and State jurisdiction over the economic phases of air transportation. Because of the confusion over this jurisdictional question and the certainty that railroad interests

in many states will again attempt to pass state laws setting up state controls over the intra-state portions of routes operated by inter-state carriers, it is expected that there will be considerable support for the early consideration of this bill.

On the Senate side, Sen. Pat McCarran (D., Nev.) has an understanding with Sen. Josiah W. Bailey (D., S. C.) chairman of the Senate Commerce committee, that his bill, S. 1, which would recreate the Civil Aeronautics Board as an independent agency of government, will be taken up next by the Commerce committee. There is some reason to believe that Sen. McCarran may attempt to substitute his amended All American Flag Line bill, S. 326, on the committee's agenda in order to get an immediate hearing on the issue involving international air transport policy.

Aviation supporters in Congress recognize that one way to stop any trend toward placing the Civil Aeronautics Board under the Interstate Commerce Commission is through passage of a bill which would re-establish CAB as an independent agency and which would plainly stamp the will of Congress on matters pertaining to the Board's future role in aviation. If Congress re-organized CAB, it does not appear likely that President Truman, under powers which will be accorded him in the Reorganization Act, would make any move to place CAB under the railroad dominated ICC. Senators who know President Truman's feelings on matters of aviation, doubt whether he will do that under any circumstances but all recognize that there may be considerable pressure exerted on him to accomplish such a transfer.

State Dept. Asks British to Open Air Bases Leased to U. S.

It was revealed last fortnight that the State Department several weeks ago asked the British to open for commercial use air bases on which the U. S. secured 99-year military leases in exchange for 50 overage destroyers.

Whether the British will answer the request in advance of bilateral aviation talks between the two governments was the subject of some speculation as this issue went to press. Some officials were inclined to think that a separate answer would be forthcoming, while others believed a decision would depend on talks between the governments.

Involved in the deal are the following fields, Harmon Field, Stephenville, Newfoundland; Argentia Field, Newfoundland; Atkinson Field, British Guinea; Kindley Field, Bermuda; Beane Field, St. Lucia; Collidge Field, Antigua; Waller and Carlson Fields, Trinidad; and Vernan Field, Jamaica. All of these except Kindley were involved in the destroyer deal.

Receiving little publicity was the fact that the U. S. had also asked use of Gander, Newfoundland; Goose Bay, Labrador and Mingnan, Canada. These three bases were not under the 99-year agreement and the U. S. has no control over them. Newfoundland bases are already being used on a provisional basis. The field at Mingnan, on which a note was sent to the Canadian government, would be used as an alternate, officials explained.

Truman Favors Equal Status For Air, Land, Sea Forces

A PROGRAM merging the Army and Navy into a single department and for the first time giving air power equal status with land and sea forces was proposed by President Truman in a 6,000-word special message to Congress on Dec. 19.

Under the President's proposal, the new cabinet Department of National Defense would be under a single civilian secretary, with air, sea, and land forces each under separate assistant secretaries. The Navy would keep its carrier and water-based aviation, but not land-based units. It would also retain the Marine Corps.

The Chief Executive asked Congress to adopt this seven-point program for unification:

1. Creation of a single Department of National Defense "charged with the full responsibility for armed national security" and consisting of the armed and civilian forces now included in the War and Navy Departments.

2. A civilian, nominated by the President as a cabinet member, would head the new department as Secretary of National Defense, aided by a civilian under-secretary and several civilian assistant secretaries.

3. There would be three branches of the new unified department—land forces, naval forces, and air forces—each under an assistant secretary. This would result in creation of a separate air force.

4. The undersecretary and the assistant secretaries would be available at all times for assignments by the President or the Secretary of National Defense.

5. The President and the Secretary should be given authority to set up central coordinating and service organizations in the armed services, principally in the field of procurement. This would reduce costs of operation by eliminating duplication.

6. There would be a chief of staff for the overall department with subordinate commanders for each of the component branches—Army, Navy, and Air.

7. The Chief of Staff and the commanders of the three coordinate branches would make up an advisory body to the President and the Secretary.

As "an added precaution" against over-emphasis of any one branch of service, Mr. Truman recommended that the position of Chief of Staff be rotated among the services at least every two or three years. No one officer would serve as Chief of Staff for more than a single term, except in case of war emergencies.

Emphasizing that his underlying reason for unification was to be prepared in event of another war, the President listed these principles behind his recommendations:

"We should have integrated strategic plans and a unified military program and budget."

"We should realize the economies that can be achieved through unified control of supply and service functions."

"We should adopt the organizational structure best suited to fostering coordi-

nation between the military and the remainder of the government."

"We should provide the strongest means for civilian control of the military."

"We should organize to provide parity for air power."

"We should establish the most advantageous framework for a unified system of training for combined operations of land, sea, and air."

"We should allocate systematically our limited resources for scientific research."

"We should have unity of command in outlying bases."

"We should have consistent and equitable personnel policies."

Pogue Tells President He Will Stay at CAB 'For the Time Being'

After a conference with President Truman last month, L. Welch Pogue stated that he will remain as chairman of the Civil Aeronautics Board "for the time being." The President is reappointing Pogue chairman for the coming year.

President Truman called the CAB chairman to the White House after hearing reports that he was planning to resign (AMERICAN AVIATION, Dec. 15). The President asked him to remain with CAB, and Pogue is doing so "for the time being."

What period of time this covers is not known, but Pogue denied press stories that he had agreed to remain as chairman for another two years.

Lowell Yerex Retires From TACA System

Retirement of Lowell Yerex, founder, president and general manager of the Latin American airline system known as TACA, was announced last fortnight by Benjamin F. Pepper, chairman of the board.

For the past 14 years Yerex has headed TACA Airways, S.A., parent company of the seven TACA subsidiary and affiliated companies which operate throughout most of Central and South America.

Yerex likewise is retiring from active office in these subsidiary and affiliated companies. He will remain as a director of the parent company, the announcement said.

Air Mail to NEI

Air mail service limited to letters not exceeding one ounce and post cards has been authorized to the Netherlands East Indies, according to the Post Office. The rate will be 70¢ a half ounce or fraction. Ordinary mail service has not yet been resumed and no registered or special delivery mail may be sent.

Wright Lecturer Discloses New-Type Propulsion Method

Ducted Fan Type of Gas Turbine Described by Cox

By SYDNEY CARTER

AN HITHERTO undisclosed type of gas turbine propulsion, and a device which permits operating a jet turbine at full power while coming in for a landing were revealed for the first time last fortnight by Dr. Harold Roxbee Cox, head of Power Jets, Ltd., and vice president of the Royal Aeronautical Society, at a press conference preceding the ninth Wright Brothers Lecture which he delivered in Washington under the auspices of the Institute of the Aeronautical Sciences.

The new propulsion method is known as the ducted fan type and for certain types of operation holds promise of combining some of the high speed and propeller elimination characteristics of the pure jet engine with the increased economy and improved climb characteristics of the propeller driving turbine. Essentially, as Dr. Cox explained it, it is a small diameter propeller operating in a tunnel. A typical installation, he said, would be to take a pure jet turbine and place a second turbine in the discharge tube, which would drive a rotating fan in a second duct surrounding the normal jet duct. The effect of this fan would be to draw in additional quantities of air, and compress and discharge them, thus augmenting the jet thrust of the original engine.

Dr. Cox emphasized that the ducted fan type of turbine was not to be considered as a cure-all, but merely as another method of applying the gas turbine for certain types of operations such as fighter-interceptor aircraft. In general, he said, the type of propulsion to be used for any given operation will be determined by the weight of power plant plus weight of fuel criteria, and that aircraft would be designed as an integrated whole in which the power plant and airframe were blended for optimum results. He stated that in his opinion the fighting forces would swing over to gas turbine

propulsion of some sort to the complete exclusion of the reciprocating engine in the very near future, with commercial transport aircraft following, and the small lightplane the last holdout of the piston engine. We would be very ill-advised, he said, to design any more piston engines in the large sizes.

On the question of axial versus centrifugal compressor turbines, Dr. Cox said that ultimately we would probably arrive at a compromise with axial compressors in the initial stages and centrifugal in the final stages, but that it will probably be a little while before we build an engine embodying these principles.

Asked about the compound engine, he said that it would undoubtedly produce the greatest fuel economy, but that it would probably also be the heaviest, and would have to be judged by the weight of power plant plus weight of fuel criteria for specific operations.

On the matter of the high weight per horsepower of the recently announced Bristol Theseus I propeller driving turbine, Dr. Cox said that he did not feel qualified to discuss the Bristol engine. He added, however, that we are much less advanced in the development of propeller driving turbines than in the jet propulsion models.

The thrust spoiler, Dr. Cox revealed, was a device designed to overcome the problem arising from the length of time required in getting a turbine up to full thrust. For example, when coming in for a landing, if the pilot throttles down a normal jet engine and finds he has misjudged his landing, it is doubtful whether he can regain effective power in time for it to do him any good. The thrust spoiler is a device which is moved across the nozzle killing the thrust and still permitting the turbine to be run at full power. In an emergency, it can be moved out of the way, providing full thrust instantaneously. The thrust spoiler has now reached a stage of development, according to Dr. Cox, where it not only completely kills forward thrust power, but

American Overseas Gets Permit

The CAB last fortnight granted American Overseas Airlines permission to serve Stockholm, Oslo and Copenhagen through the use of Bromma Airport, Gardermoen Airport and Kastrup Airport, respectively. It was understood that AOA was shooting at mid-January as a starting time for its Scandinavian service.

actually transforms it into a 12 percent braking power for slowing down the aircraft.

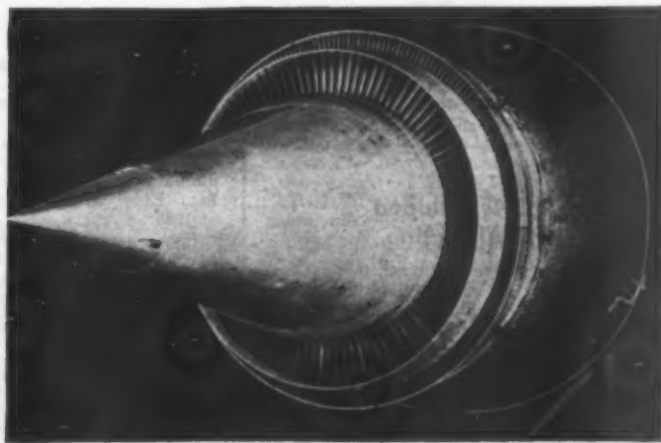
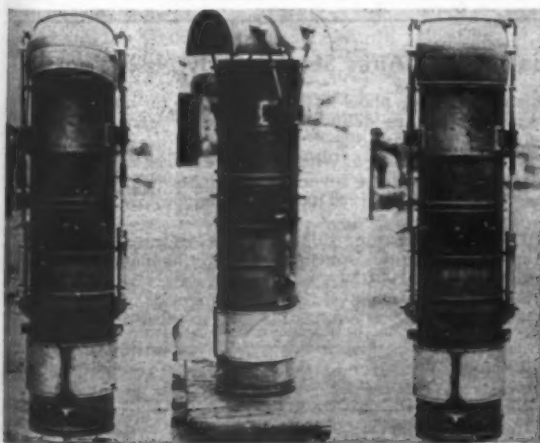
Dr. Cox stated that metallurgical problems were being emphasized out of all proportion to their importance in connection with the gas turbine, and pointed out that such seemingly trivial items as dirt in the compressor were far more important today. On the question of serviceability, he said the Welland Engines in the Meteor were run on 180 hr. overhaul periods in military service, and undoubtedly would have an increased life in civil operations. Several British engines, he added, had undergone 500 hour test stand runs with certain combustion parts changed after 250 hours.

PAA, AOA Designated To Share Landing Rights in Britain

The Civil Aeronautics Board last fortnight officially designated Pan American Airways and American Overseas Airlines to divide equally between them the 14 landing rights per week granted U. S. air carriers by Great Britain under a temporary arrangement pending the conclusion of a formal bilateral air transport agreement.

Under the terms of the arrangement, the Board order specifically limits each carrier to a weekly seat capacity of not more than 250. It also states that one-way fare under the arrangement shall be \$375.

The Board's action came after the U. S. and Britain had failed to reach agreement



The Thrust Spoiler is shown at left in partially closed, closed, and fully open position. At right is the Ducted Fan Assembly showing propeller blades used to draw additional air through an outer duct to provide augmented jet thrust.

on a "formal" temporary arrangement. The British refused to allow Pan Am more than two weekly trips until fare was raised from \$275 to \$375, an action which the company subsequently took. In order to make the 14 weekly trips available, the British then stated that U. S. carriers could operate 500 seats weekly. This is sufficient to give each airline a daily trip with DC-4 equipment.

The 500-seats-a-week formula is not one that would be acceptable to the U. S. in a permanent agreement. The "capacity" theory is one which is against U. S. principles in international air transport. However, unable to arrive at an interim agreement, the British were free to do as they pleased, and the "capacity" theory was used. It is not serious with present equipment, but would become a matter of concern when the airlines started using larger planes. By that time, however, bilateral talks will have been held, and the situation will have changed.

As this issue went to press, Pan Am was operating five trips weekly and expected to go to seven shortly. AOA, operating five, also expected to add two in the near future.

(AOA was scheduled to inaugurate its sixth schedule Dec. 26 with a flight between New York and London, and its seventh on Dec. 30, probably originating it in Washington.)

Pan Am's weekly frequency allotment includes two landing rights granted under the 1937 agreement with Britain and five of the 12 rights granted under the temporary arrangement. AOA's seven landing rights are all provided under the temporary arrangement.

The CAB order states that any carrier utilizing any of the 12 newly granted rights "shall charge a one-way passenger fare of \$375 on trips between the two countries, and comparable freight rates and excess baggage charges."

Faulty Technique Blamed For Many Air Accidents

Thirty-seven percent of the 3,343 non-air-carrier accidents reported by the CAB's Safety Bureau for 1944 were caused by faulty technique, the agency reported last fortnight. Nearly 17% of the total was attributed to carelessness, 15% to faulty judgment, and 14% to powerplant failure.

Of the number of accidents reported, landings accounted for 37.6%, forced landings for 20.5%, and taxiing for 14.7%. Ninety-three percent of the landing accidents resulted in no injury to the occupants of the planes, however, the CAB report showed. Highest fatality record occurred under the classification, collision with other aircraft—60%.

Fifty-two DC-4s Included In Latest SPB Allocation

The Surplus Property Board, in its 22nd allocation Dec. 20, allocated 52 four-engine DC-4 type surplus transport planes, 38 of which went to domestic applicants and six to China National Airways Corp.

Five basic type C-54s went to Pennsylvania-Central Airlines, three C-54A models to John C. Knipp & Sons and C-54B types to the following U. S. carriers: Pan American 6, Northwest 6, United 5, American 5, TWA 5, Eastern 5, Western 2, Delta 3 and Braniff 1.

Appeal Court's Ruling Unchanged in Airline Traffic Guide Case

The United States Supreme Court last month denied a petition for certiorari to review a decision of the Circuit Court of Appeals for the Seventh Circuit, exonerating American Aviation Associates Inc. of all charges of copyright infringement made by the *Official Guide of the Airways*.

The Circuit Court had ruled that *Universal Airline Schedules*, former American Aviation publication, did not infringe any copyrights held by the *Official Guide of the Airways* and that American Aviation Associates was not guilty of infringement or unfair competition. American Aviation now publishes *American Aviation Traffic Guide*, successor to *Universal Airline Schedules*.

One issue in this copyright suit attracted considerable attention in airline advertising circles because the trial judge had in effect sustained a contention that an airline which had paid the *Official Guide* to publish its schedules could not authorize another publisher to reproduce this same material in a competing publication. This contention was overruled by the Court of Appeals whose decision has now become final.

Effect of the decision is to give the airlines full control over their schedule, fare table and general information material as published in a magazine or newspaper. Any copyright on the magazine or newspaper which covers these schedules will belong equitably to the airlines with the result that they can control republication of this material.

It is possible that, in connection with advertising schemes, magazines might publish airline schedules which were not satisfactorily accurate and might be a detriment to the airlines. Under this decision, the airlines can control unauthorized publication of their schedules insofar as such material by virtue of arrangement, style and garb may be the subject of copyright.

Prior to 1943 airlines had reserved space in *Official Guide* for schedule listings, paying for space at a rate based on pages required. When an airline reserved space for the first time, it supplied complete

copy. An *Official Guide* airline listing for a given month was derived from the same airline's listing for the previous month, which had been corrected or made current by the airline itself.

In 1943 *Universal Airline Schedules* started, and airlines reserving space were asked for complete copy for their listings. First copy received consisted of a major airline's listing in *Official Guide* for the previous month with pencil corrections to make it current. In order to avoid charges of copying, *Universal* sent out a request for original copy. At least two airlines replied by stating that their own listings in *Official Guide* belonged to them, being advertising, that they could authorize its republication as they saw fit, and that they would supply original copy only to accommodate American Aviation Associates Inc.

Official Guide then instituted copyright suit on the principal ground that similarity of airline listing pages was such that *Universal* must have copied plaintiff's publication. American Aviation produced airline copy, from which it appeared that some airlines had copied in whole or in part from their *Guide* listings. The company claimed, however, that pages in the *Guide*, insofar as they were covered by any copyright on the publication itself belonged to the airlines by virtue of the fact that the airlines had paid to have their listings published and were thus the equitable owners of any copyright on their listings.

After *Official Guide* had won the case in the trial court, most U. S. airlines joined in filing a brief amici curiae with the Court of Appeals. They contended that the right to copyright was an incident to ownership, that the schedule material furnished to *Official Guide* was created by the airlines, who as authors were therefore the owners. They further argued that as there was no assignment of any rights in this material to *Official Guide*, the *Guide* had no right to get a copyright on it, and that any copyright on the magazine as a whole did not attach to the airline listings. The Circuit Court of Appeals ruled for the defendants.

Harold Harris Wins Award

Brig. Gen. Harold B. Harris, former commanding officer of the ATC's domestic transportation division and now vice president and general manager of American Overseas Airlines, has received the Legion of Merit for his wartime accomplishments.

Iberia Plans London, Buenos Aires Service Early Next Year

MADRID—Iberia, the Spanish airline, plans to begin service to London and Buenos Aires as soon as three C-54s are delivered early next year, according to Gomez Lucia, Iberia's director-general.

The company has not yet received Pratt & Whitney spare parts ordered last January with the result that only one out of seven DC-3s in its fleet is operating. Even with restrictions, Iberia will carry 100,000 passengers by the close of 1945.

Iberia seeks five more DC-3s, but is having difficulty making purchases from surplus equipment in Europe. One of the company's current headaches is the desire of both Pan American Airways and TWA to have Iberia act as exclusive agent in Spain. It is doubtful if any such exclusive agreement is made, since Iberia wishes to cooperate with both and is looking forward to close cooperation with both carriers.—W.W.P.

(In the U. S., Pratt & Whitney Aircraft said that it had not received "any substantial orders for engine parts" from Iberia, although it was possible that the Spanish carrier was attempting to obtain P&W parts from other sources. P&W said that a few small orders had been received from Iberia and that these had been delivered promptly.)

Philippine Airlines to Resume Service With Aid of TWA

TRANSCONTINENTAL & WESTERN AIR is acquiring 28% of the capital stock of Philippine Airlines and will assist the carrier in resuming service in the islands, it was announced last fortnight by Jack Frye, TWA president.

Philippine Airlines suspended commercial service at the time of Pearl Harbor, when its equipment and personnel were turned over to the U. S. military services.

Frye said that Arthur Stewart of Los Angeles, western traffic manager for TWA, was being elected vice president of Philippine Airlines and that Col. P. I. Gunn, a veteran of more than 20 years in aviation and one of the best known flying officers in the Far East, had returned to his post as operations manager.

TWA will provide certain technical personnel and assistance to the Philippine carrier, Frye said, in addition to making TWA's facilities available to Philippine Airlines for personnel training.

The island carrier has purchased five DC-3 type aircraft from the U. S. government, and these are now undergoing conversion for commercial use in the Philippine Airlines' shops in Manila.

PAL began operations in 1940, flying passengers, cargo and mail from Manila to Baguio and Manila to Cebu via Paracale, Legaspi, Catarman, and Tacloban, and from Legaspi to Cebu, a total of 906 miles of routes.

Other services from Manila to Cebu, Surigao, Del Monte and Davao, and from Manila to Zamboanga, via Dumaguete and Dipolog, with a connecting service between Zamboanga and Davao, were approved but the outbreak of the war prevented their operation. Application for further service over a proposed route from Baguio along the northern coast line to Aparri has been held in abeyance pending procurement of equipment and personnel.

Frye said that the system when fully developed will blanket the islands from Luzon to Mindanao, with a network of nearly 3000 route miles.

The National Development Co., an agency of the Philippine Commonwealth, is the largest single stockholder in Philippine Airlines, Frye said. Other principal stockholders include Col. Andres Soriano, former Minister of Finance in the Philippine government; Elizalde & Co., and the De la Rama Steamship Co.



Philippine Airlines' Proposed Routes

Photo Reconnaissance Plane With 4 Engines Unveiled by Republic

Republic Aviation Corp., announced on Dec. 31 that its XF-12, first long-range, high-speed aircraft specifically designed for photographic reconnaissance, is nearing completion and will begin test flights within the next few weeks.

Exact performance figures on the new aircraft were not disclosed, but Alfred Marchev, Republic president, said with ATSC approval that the XF-12 is designed to operate at high altitudes at speeds comparable to war-time fighter planes. The plane is powered with four Pratt & Whitney Wasp Major engines.

The XF-12 is expected to meet AAF demands for long-range performance



Republic XF-12

Douglas, Boeing Planes Establish Speed Records

New west-east cross-country speed records were established in December by Douglas' XB-42 bomber and the Boeing B-29 "Dreamboat"—both with average speeds well over 400 mph.

Powered by two Allison V-1710 engines rated in excess of 1,820 hp., the XB-42 averaged 432 mph. in speeding 2,295 miles from Long Beach, Calif., to Washington, D. C., in five hours, 17 minutes on Dec. 8. The record was not recognized as the official "transcontinental" mark, but National Aeronautic Association said that the time would stand as the inter-city record from Long Beach to Washington.

Three days later on Dec. 11, the Boeing "Dreamboat", which holds the long distance flight record from Guam to Washington, D. C., established a new transcontinental mark by flying the official Burbank-Floyd Bennett Field course of 2,464 miles in five hours, 27 minutes. Its average speed was 451 mph., or 19 mph. better than that of the "Mixmaster".

The XB-42—whose commercial transport counterpart, the DC-8, is under construction—was destroyed in a crash near Oxon Hill, Md., shortly after take-off from the Army's Bolling Field on Dec. 16. The pilot and two co-pilots parachuted to safety after jettisoning the counter-rotating propellers through use of a detonating mechanism.

After investigating circumstances of the accident, Edward F. Burton, chief engineer of Douglas Aircraft Co., stated that the pilot "apparently forgot to open the shutters to cool off the Allison liquid-cooled engines. It was like driving an automobile up a long mountain with the shutter in front of the radiator closed. One engine quit before he noticed how hot they were. As I understand it, he must have feathered one propeller, and tried to correct the temperature on the second engine. Before he could do that the other engine stopped."

necessary to carry out reconnaissance and photographic missions such as were not possible up to this time, Marchev said.

(Republic recently announced that it was developing for production a commercial transport—the Rainbow—which will cruise at better than 400 mph at 40,000 ft., with a range of more than 4000 miles.)

The XF-12 has a wing span of 129 ft., 2 in., and its fuselage length is 98 ft., 9 in. The tip of the horizontal stabilizer is nearly 30 ft., from the ground. Each engine nacelle approximates the size of a P-47, and two General Electric turbosuperchargers are provided for each engine. This particular airplane is equipped with a Curtiss Electric propeller, but subsequent models will be equipped with Aero-products propellers.

ATSC specifications on the XF-12 call for three cameras.

Personal Plane Manufacturers Prepare to Increase Output

Luscombe, Fairchild, Aeronca Reveal Production Programs

PERSONAL PLANE production and sales received impetus last fortnight with the announcement by one manufacturer of a consolidation of production facilities, disclosure by another of a new personal plane model, and the use by a third manufacturer of a conveyor system geared to produce 20 planes a day.

Luscombe Airplane Corp., announced that it was transferring its operations from Trenton, N. J., to Dallas in order to concentrate production of its all-metal Silvaire under one roof. The company said Dallas' central location and good flying weather were factors influencing the move.

More than 400 persons are now employed in Luscombe's Dallas plant, and this figure is expected to more than double as production increases, the company said. Deliveries of Silvaires have been underway since October.

Fairchild Engine & Airplane Corp., also was concentrating its personal planes activities in Dallas. The company's new Personal Planes Division, headed by Harry M. McKay, is headquartered at Dallas, where Fairchild's first postwar models are in production.

M-84 Ready for Tests

At the same time, Fairchild disclosed that a prototype of a new "family plane," a low-wing, single engine, four place cabin model designated as the M-84, was scheduled for flight tests. The company said the aircraft is a conversion of the Fairchild PT-23.

Aeronca Aircraft Corp., moved into mass production of its Champion (tandem) and Chief (side-by-side) at Middletown, O., with a single line floor type conveyor, timed to produce 20 airplanes a day. The conveyor replaces pre-war hand methods of production.

Aeronca's 1275-foot conveyor will carry 45 fuselages and 25 pairs of wings in a continuous line. With the contemplated addition of another conveyor at Middletown, this one 630 feet long, the company expects to greatly increase its daily production.

Aeronca said that these were some of the advantages of its conveyor system:

1. With constantly moving conveyors, it is necessary to have details and parts that are interchangeable and fit each and every as-

sembly in the same manner. This in turn is an aid to maintenance and servicing of the airplane in the field.

2. The system lends itself to good inspection inasmuch as various flaws in finished parts can be easily detected.

3. The worker is taught to do one job and do it well, making for airplanes that are consistent and uniform in their assembly.

4. Well designed pieces in large production runs make possible interchangeability of parts in different models. This again proves helpful to men in the field for maintenance and servicing.

Like Aeronca, Luscombe also is using the moving assembly line for aircraft production at its Dallas plant, whose 700-acre facilities include a CAA approved flying field.

Fairchild, in announcing the M-84, said that it would utilize many existing parts of the PT-23, including outer wing panels, tail surfaces, center section, and landing gear, except for re-arrangement of the retracting mechanism.

The M-84 was described as having a wing-span of 36 feet and 26-foot overall length. It is powered by a Continental seven-cylinder, radial air-cooled engine of 220 hp at sea level. Performance includes high speed at sea level of 150 mph, climb at 600 ft. per minute.

An outstanding feature of the aircraft is a roomy cabin, bearing a resemblance to the interiors of 1946 automobile models. Seats are adjustable and upholstered, consisting of individual pilot and co-pilot chairs, and a full width seat directly behind, capable of seating two. A large baggage compartment is behind this seat.

The M-84 is wheel-controlled, and equipment includes air-speed indicator, altimeter, compass, tachometer, engine gauge, fuel gauge, ammeter, starter, generator. Fuel capacity is 50 gallons, and gross weight of the model is 3,300 lbs.

Fairchild's new Personal Planes Division already has appointed 24 distributors, who in turn have named more than 100 dealers. Sales director for the new division is Lee H. Smith, and Robert S. Smith has been named to handle sales promotion. Research activities will be supervised by Sherman H. Fairchild; engineering and production by Louis Fahnestock, 3rd.

Spartan Producing Trailers

Spartan Aircraft Co., Tulsa, Okla., is manufacturing all-aluminum house trailers, engineered and designed along aircraft lines and turned out on an assembly line basis.

Interest in Personal Flying, Aircraft Shows Steadily Increasing

Personal flying activities and aircraft shows are steadily growing in postwar prominence as evidenced by a number of events held in recent weeks or announced for the future.

Since the day after Christmas, personal lightplanes approximating 2,000 in number have joined in the first postwar Light Airplane Tour to Florida, according to latest reports received from Gulf Oil Companies, sponsors of the event with the cooperation of 11 airplane manufacturers. The enrollment marked an increase of 40% over the largest such flight prior to the war.

Open to planes with engines of 125 hp or less, the Tour runs to Jan. 20. Four airways, along which free gasoline and oil will be furnished flyers as they converge on Miami from all points east of the Rockies, have been laid out by Gulf.

A leading attraction for the pilots will be the All-American Air Maneuvers at Miami on Jan. 4, 5 and 6. Plans for participation in the Maneuvers by the Florida Civil Air Patrol were formulated at a meeting of wing staff officers, group and squadron commanders from 22 Florida cities at Ft. Lauderdale on Dec. 1.

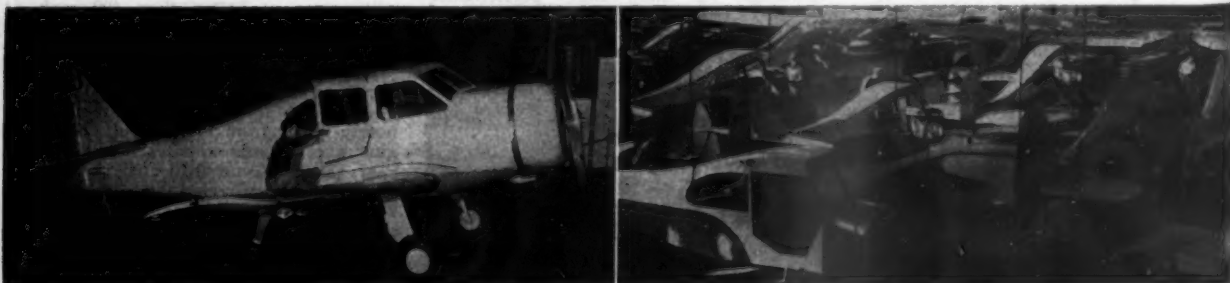
Sportsmen Meet at Palm Beach

The Sportsman Pilots Association, which met Dec. 8-9 at Pinehurst, N. C., voted to hold its next meeting in April, 1946, at Palm Beach, Fla.

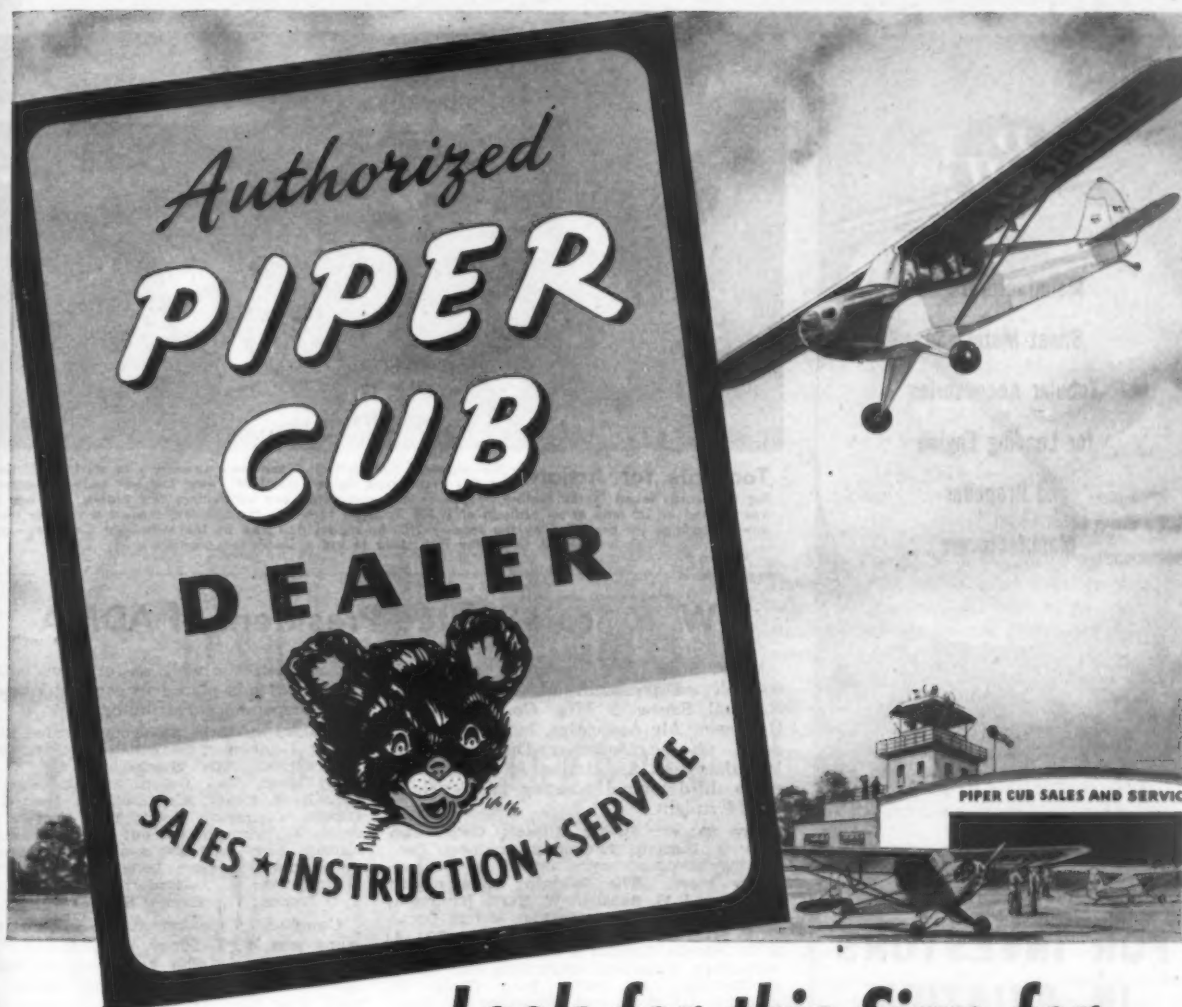
During the past fortnight, the Aircraft Industries Association announced that it will sponsor two national aircraft shows in the fall of '46, one in the East and one in the West. Ernest R. Breech, chairman of AIA's Air Show Committee, stated that AIA probably will retain professionally qualified personnel to plan and direct the two shows, which will be staged on a scale comparable to the pre-war national automobile shows.

Also, the Dallas Chamber of Commerce has revealed plans to resume its annual aircraft show Mar. 1-15. Under the name of the Pan-American Aircraft Exposition, the show will be on an international scale, with manufacturers throughout the country invited to display their products to the Southwest and Latin-American markets. El Paso, Tex., celebrated its International Aviation Day on Dec. 15-17.

The National Air Races, scheduled for Cleveland, O., in July, have been postponed until next fall.



Interior view of final assembly department at Aeronca Aircraft Corp. plant (right) and photo of the Fairchild M-84.



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This sign represents a reputation in aviation. It identifies a dependable dealer backed by a name that has meant leadership in the light plane field for over fifteen years.

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When you want the most for your money in an airplane, in flying instruction and in

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Too Late for Action—The Japanese had perfected and were preparing to start production on this pusher-type fighter, the J7W1, when the war ended. According to records found in the factory, the plane had completed two satisfactory test flights. On one it was clocked at 420 mph at an altitude of 27,000 ft. Also known as the Shinden, the plane has the most powerful engine yet produced by the Japs—a 2100 hp model designed by the Mitsubishi Company—and is believed to be the first plane to use a six-bladed propeller.

W. F. Scott Elected President of ADMA

W. F. Scott, Jr., Supply Division, Inc., was elected president and H. P. Ladds, National Screw & Mfg. Co., and J. C. Harrower, Air Associates, Inc., vice presidents of the Aviation Distributors & Manufacturers Association at the association's third annual meeting in Cleveland last fortnight.

Ray Snyder, Snyder Aircraft Corp., and Tom O. Duggan, Thompson Products, Inc., retiring president, were named to the advisory board. The following were named directors: J. G. Bausher, W. Harris Thurston, Inc.; R. D. Hicks, Continental Motors Corp.; C. E. Monray, United States Rubber Co.; A. E. R. Peterka, Lamson & Sessions Co.; Duane Stranahan, Champion Spark Plug Co.; Walter B. Hawkins, Air Parts, Inc.; George W. Jalonick, III, Southwest Airmotive Co.; Rudy C. Mueller, Omaha Aircraft Co.; R. V. Trader, Bob Trader-Aero Supply; and Harold F. Wood, Aero Service & Supply Co.

Two resolutions were passed by the group. The first was directed at the Civil Aeronautics Administration requesting it to do all in its power to improve and perfect its recordation system in order to facilitate the transmission of accurate and timely information to the industry. The second was directed at the Surplus Property Administration and called for (1) more accurate investigation of items offered and more complete description according to customary trade type designation; (2) a more equitable pricing program which will be in keeping with industry custom and which will provide an incentive for each class of trade to participate; and (3) the appointment of an industry advisory committee to provide information to the Disposal Agencies on both the above and on the effect large quantity sales will have upon the industry.

The general sessions were devoted primarily to distribution problems and manufacturer-distributor relationships, with the discussions covering such subjects as the type of assistance manufacturers should provide dealers and distributors, discount rates, whether there was room in the set-up for sub-distributors such as were found in the automotive industry and the question of whether manufacturers of aircraft should be sold

replacement as well as original equipment and thus placed in competition with the independent distributor.

Speakers on these problems included Richard N. Bomberger, Sensenich Brothers; Heyliger Church, The Weatherhead Co.; G. B. Van Dusen, Van Dusen Aircraft Supplies, Inc.; R. B. Kenty, Air Associates, Inc.; C. L. Corwin, Champion Spark Plug Co.; W. F. Scott, Jr., who pointed out that the average aircraft buys only \$30 worth of accessories and supplies a year; Dwight P. Joyce, The Gildden Co.; R. V. Trader; Ray Snyder, and T. G. Tynan, The Electric Storage Battery Co.

Concluding speaker at the general sessions was W. T. Piper, president of Piper Aircraft Corp., who expressed extremely optimistic views on private flying. He said that the airplane was essentially a long trip machine, and the trouble to date had been that not enough people had wanted to go on long trips.

At the beginning, he said, lightplanes had been held back by two lacks—engines and airports. The former, he added, had been overcome and he expressed hope that the latter would be overcome by men returning from the Army who would start so many grass fields that the private pilot wouldn't have to worry about air-marking—they would always be so close to a field they could come down and ask where they were.

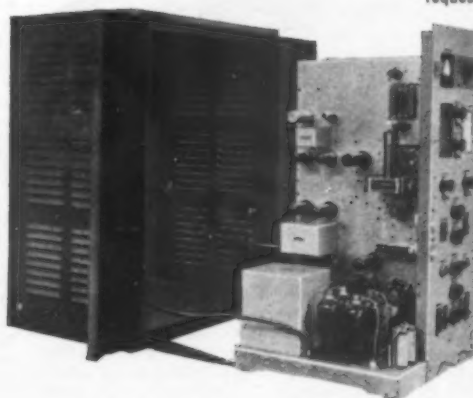
Referring to the lightplane industry, he said that there was a new plane being built in every cellar in Wichita, and that one engine manufacturer had received requests from more than 200 different people building personal aircraft. He said it wouldn't be hard to get into the industry, and that competition would get the prices down. In fact, he said, people will be able to get airplanes during the next few years for a lot less than they cost.

Phelps Barnum Opens Office

Phelps Barnum, for three and one-half years an architect for Pan American Airways, has returned to private practice having formed a partnership with W. Stuart Thompson with offices at 125 East 46th St., New York.



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ON THE HIGHWAYS
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Australian Airlines Defeat Nationalization Move

But Government Line May Become Competitor

THE AUSTRALIAN High Court this past fortnight ruled that private air transport operations may be continued by the three airlines which had challenged the validity of the Australian Airlines Act of 1945.

This Act became law on August 16, 1945, and provided that all interstate airlines were to be nationalized, and all interstate air transport operations were to be provided by the Australian National Airlines Commission, a government agency.

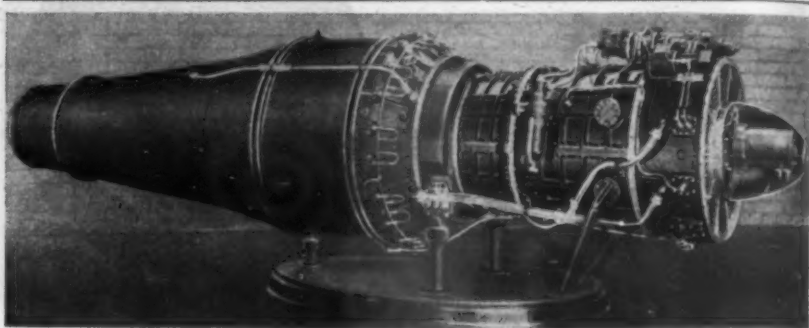
The five judges unanimously overruled demurrers of the Commonwealth Government which claimed that all of the legislation was valid. Chief Justice Sir John Latham, speaking on his own behalf and for three other judges, said that the result of the judgment is that the Court decides unanimously that the sections of the law are invalid which would deny an airline license to anyone except the Australian National Airlines Commission. The Court declared void that part of the Act which would terminate existing interstate airline licenses. The Court also decided that the discretion of the Commonwealth Government to grant or refuse an airline license is not absolute and unqualified.

Other sections of the Act were declared valid, however. It appears that the Commonwealth Government will have power to establish the Australian National Airlines Commission and to operate any interstate route, even though it may not exclude other operators. Observers state that, in effect, the government airline would have to operate in competition with existing private airlines.

Some also interpret the Court's decision to mean that the Department of Civil Aviation can no longer refuse to grant licenses for parallel services to competing companies as it has done in the past. In this event, several airline companies may inaugurate services, for example, on some of the more desirable routes for which Australian National Airways has held exclusive licenses, it is reported.

Justice Starke concurred in the overruling of the Government's demurrers but did not agree entirely with the reasons expressed by the Chief Justice. The court action was brought about by the challenges of three companies: Australian National Airways, Guinea Airways, and MacRobertson-Miller Aviation Company.

The Act in question had been passed by a strong Labor Government. The developments in Australia are considered somewhat comparable to the situation which might arise in Great Britain if private aviation interests were to attempt to challenge airline nationalization legislation after it has been passed by Parliament. However, an important difference is the fact that, in Great Britain, Parliament itself is the final judge of the validity of legislation. British sources explain that the House of Lords is the ultimate court of appeal in England and Wales, with the Supreme Court of Judicature ranking below the House of Lords. Acts of Parliament, upon approval by the King, become the law of the land.



Metropolitan-Vickers Jet Turbine.

Bristol Gas Turbine Develops 2,000 HP

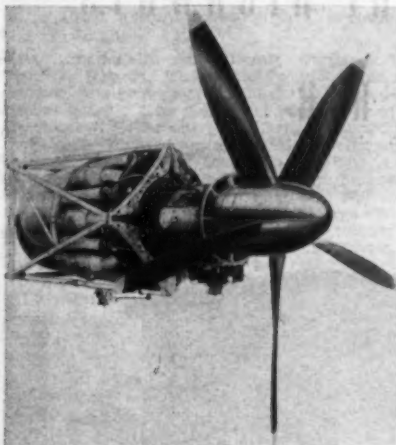
The Bristol Theseus I, a propeller driving gas turbine developing 2,000 hp, was revealed last fortnight by the Bristol Aeroplane Co.

The unit, which has a dry weight of 2,310 lbs. (20 lbs. greater than that of the 2,000 hp Pratt & Whitney R-2, 800 2SB-G air-cooled reciprocating engine), consists of a multi-stage "axial cum

Two new jet propulsion gas turbines likewise were announced by the British last fortnight. The first of these is the Metropolitan-Vickers F2/4 which is believed to be the first axial compressor type turbine to be announced by a British manufacturer. It has a thrust of 3,500 lbs. at 7700 rpm with a fuel consumption of 1.05 lbs./thrust lb./hr. overall length is 13 ft. 3 in., maximum diameter 36 3/4 in., and dry weight 1,750 lbs. The first F2/4 ran its initial tests last January and has since completed an 100-hr. endurance bench test under type test conditions. An earlier model with a rated thrust of 1,800 lbs. was cleared for flight in December 1942.

The second new British jet engine—the Rolls-Royce "Nene"—has a double entry centrifugal compressor, single stage turbine, and nine straight flow combustion chambers. Static thrust is 4,000 lbs. and maximum thrust 4,500 lbs. at 12,300 rpm with a specific fuel consumption of 1.05 lbs./thrust lb./hr. The Nene has a maximum diameter of 49.5 in., overall length of 97 in. and net weight of 1,550 lbs. as compared with the 42.5 in. diameter, 84 in. length and 1,000 lb. weight of the Derwent, used to power the recent record breaking Gloster Meteor. The Nene was first run in October 1944, and present models are said to have surpassed design performance, and to be cleared for flight at a maximum thrust of 5,000 lbs.

The British announcement states "An engine of this design has been flown in the American Lockheed Shooting Star. It gave the aircraft a better performance than with the U. S. built turbo-jet which normally powered it."



Bristol Theseus I Prop Turbine.

centrifugal" compressor which aspires air through an annular entry around the reduction gear; a number of combustion chambers; two separate turbine stages, one of which is coupled directly to the compressor, and the second of which drives the propeller reduction gearing by means of a forward extension shaft; a heat exchanger which takes heat from the gases leaving the second turbine stage and gives it to the compressed air on its way to the combustion chambers; and a controllable nozzle through which the exhaust gases pass finally to produce jet thrust.

Full throttle effective power at a forward speed of 300 mph ranges from about 2,375 hp at sea level to 800 hp at 40,000 ft. Specific fuel consumption ranges from .57 lbs./eff. bhp hr. at sea level to .475 lbs./eff. bhp hr. at 40,000 ft. This compares to a cruising fuel consumption of .48 lbs./hp/hr. for the P&W R-2800 2SB-G.

Canadian Transport in August

A total of 56,063 revenue passengers were transported by air carriers in Canada during August, 1945, as compared with 43,827 in August, 1944. The 1945 figure represents 36,283 passengers flown by Canadian carriers and the balance by foreign carriers, chiefly U. S. Passenger miles flown showed a proportionately greater increase because the average journey increased from 347 to 354 miles. The revenue passenger load factor for Canadian carriers showed a slight decrease from 90.6% to 89%, with the international load factor dropping from 84.2% to 83.8%.

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Your engine has horsepower that is not available when you use a fixed pitch propeller. It's an engineering fact that any fixed pitch propeller is a compromise between good take-off performance and good cruising.

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And you'll find the Beech Propeller is lightweight, simple to install, easy to operate. You may have your choice of manual control, electric control, or electric control with constant speed. For long, more enjoyable flying hours install a Beech Controllable Propeller on your airplane.

Write today for our folder giving full details of the Beech Controllable Propeller

PLUS PERFORMANCE PROOF

Installed on the Grumman Widgeon powered with Ranger engines, the Beech R-203 controllable propeller with 85-inch blades reduced the necessary run for a water take-off almost one-half and reduced the ground run required to take off by 22.8%.

On the commercial model Culver the R-001 Beech Controllable Propeller decreased the take-off run by about 30% and increased the rate of climb by about the same percentage.

In comparative tests Beech Controllable Propellers have shown an increase in rate of climb and decrease of take-off run from 15% to 26% for the various types of airplanes on which it was tested.

These propellers were made, during the war, for the Army Air Forces and were used on the various fighting fronts and in the United States. Their record of performance is proof enough of Beech Propellers' ability to "take it" and give long hours of more enjoyable, more economical flying.

Beech Propellers manufactured under Roby patents

Beech Controllable Propellers are for sale by Beech distributors and dealers

PT-19 equipped with Beech R-203 Propeller shows the simple and clean installation

Beech Aircraft



BEECHCRAFTS DID THEIR PART

CORPORATION

WICHITA, KANSAS, U. S. A.

First of PICAQ's Regional Meetings Set for March 4

Reports Submitted On Communications, Rules

THE inter-governmental North Atlantic regional conference being convened by Eire has been scheduled for March 4, 1946. The meeting had been tentatively set for April 8. This Dublin meeting is the first of a series of similar conferences planned by the Provisional International Civil Aviation Organization (PICAQ).

It is expected that other regional conferences authorized by PICAQ will be scheduled at intervals of two or three weeks after the first meeting in Eire. It seems likely that the European-Mediterranean regional conference will be convened in Paris by the French Government about the beginning of April. The Middle East conference may be held in Cairo by April 15 or 22.

Following the recess of the recent Council sessions, Council President Edward P. Warner left Montreal for Dublin on a tour of several European capitals in connection with the PICAQ regional conferences and the maintenance of air navigation facilities. Warner will first confer with the Eire Government on the North Atlantic meeting.

An expanded and revised set of international rules of the air and air traffic control standards are contained in a report of the Air Navigation Committee's Division on Rules of the Air and Air Traffic Control Practices. The report incorporates one of the annexes of the International Commission for Air Navigation (CINA) and two of the technical annexes adopted at the Chicago Conference last winter.

The Division recognizes the need for regional organizations to coordinate air traffic control and to deal with problems peculiar to the areas in such matters as standards of adequacy and mutual aid in maintaining control facilities and services. The Division agreed that individual nations should be responsible for operating practices based on standards prescribed by PICAQ.

Because of the variety of ways in which the word "contact" is used in aviation, the Division urged the use of the phrase "visual flight rules" instead of "contact flight rules". The word "contact" is to be reserved for use in connection with radio communication.

The Communications Division of the Air Navigation Committee, submitted a report containing standards and recommended

Portugal, U. S. Conclude Bilateral Air Agreement

Portugal and the United States have concluded a bilateral air transport agreement which provides Five-Freedom traffic privileges. Portuguese air services are granted the right to operate from Lisbon to New York via the Azores and Bermuda.

The agreement provides for operations by U. S. carriers over the following routes: (a) U. S.-Bermuda-Azores-Lisbon, from which there is one extension to London and another to Barcelona and Marseille. (PAA has CAB certification for this service); (b) U. S.-Newfoundland-Lisbon, on a route to India. (The CAB has awarded this service to TWA); (c) A U. S. trans-pacific route with a stop at the Portuguese colony of Macao near Hong Kong.

practices for radio navigational aids and radio communications.

The report provides that aircraft which may have to operate on instruments "shall have on board approved radio navigation apparatus...which may be operated independently of the radio communication apparatus". Any emergency or rescue radio equipment must be designed for operation when removed from the plane.

Loran, a war-developed radar device, is recommended as a standard long-distance navigation aid by the Communications report. The Division also advised that the very high frequency two-course visual-aerial radio range be adopted as standard on international airways pending further development of the VHF 360-degree or omni-directional range.

The U. S. CAA-U. S. Army SCS-51 instrument landing system was recommended for universal adoption.

Language difficulties continue to be an unsolved problem in air transport communications for which PICAQ has as yet found no solution. The report points out that "radiotelegraphy has become the almost exclusive means of ground-air communication" in western Europe because the number of languages made voice communication too difficult. Western hemisphere nations adopted voice communications because of the great areas which required the use of only one, or sometimes two, languages. Recognizing that the choice of language depends "on considerations other than aeronautical interests", the Division stated that both systems are to be standard, with the "Q" code for telegraphy as the "most practical" at this time. The present CINA "Q" code is to remain in force for the present among the nations signatory to CINA. A new draft will be prepared and circulated among PICAQ nations.

Capt. Guillermo Gonzalez has arrived in Montreal following his appointment as Mexican delegate to PICAQ. Mexico was the only member of the 20-nation Council which had never appointed a representative to any of the Council sessions. Gonzalez resigned last August from Compania Mexicana de Aviacion in order, it is reported, to accept the post of PICAQ delegate.

PICAQ headquarters have announced that the Union of South Africa has accepted the Interim Agreement, bringing the number of PICAQ member nations to 40. South Africa also accepted the Transit Agreement embodying the "Two Freedoms."

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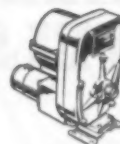
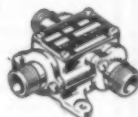
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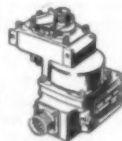


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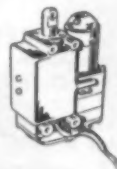
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Amended Single Company Measure Hit by ICC

Report Stuns Advocates Of 'Chosen Instrument'

OPPPOSITION from railroad quarters to the amended All American Flag Line bill in the form of an unfavorable report from the Interstate Commerce Commission came as a shock and surprise to single company proponents in the U. S. Senate.

The ICC report filed with the Commerce Committee raised the conjecture as to whether the U. S. Maritime Commission might not also subscribe to the basic point of the ICC opposition—"that resources of a railroad ordinarily should be devoted to the proper development of its own transportation system."

Under the provisions of Sen. Pat McCarran's amended bill, Class I railroads and steamship companies engaged in international and overseas commerce would be permitted to invest funds in the stock of the new company. Sen. McCarran felt that this would have the tendency for these surface transportation companies to route their off-line business to the single, international air carrier.

In addition to voicing opposition to the section which would permit railroads to purchase stock in the community company, ICC said if this provision remains in the bill, stock acquisitions by rail carriers should be subject to approval of the ICC as well as the Civil Aeronautics Board.

Pertinent sections from the ICC report follow:

"We see no close connection between domestic transportation by land or water within the U. S. and international air transportation. We doubt whether common carriers by railroad would have any object in acquiring a minority stock interest in the proposed community company and are unable to see that such acquisition would be beneficial to railroad companies. Insofar as the bill would give unqualified approval to such acquisition in principle we question whether the public interest would be served.

"On numerous occasions in the past this Commission has pointed out the harmful results of investments by railroads in enterprises not directly related to the business of transportation in which they are engaged. Notable examples of such abuses were discussed at length in our report in N. Y., N. H. and H. R. Co. Investigation, 220 ICC, 505 in which we said:

"The resources of a railroad ordinarily should be devoted to the proper development

of its own transportation system. If they are to be invested in an outside activity it should be after a finding that such investment constitutes a proper use of railroad funds or credit, that the terms of the transaction are reasonable, and that the investment is in the public interest."

"In accordance with that view we have recommended to the Congress in our annual reports for the past several years legislation by which restrictions would be imposed on the expenditure of carrier funds, incurring obligations, or acquiring property by a carrier or its subsidiaries, except for the operation of legitimate improvement or development of its property.

"The provisions of the proposed amendment to S. 326 involving railroad companies, we believe, are inconsistent with this view. If they are retained in the bill, we urge that Section 8 (g) be amended so as to require that acquisitions of stock or securities of the community company by rail carriers shall be subject to the approval of this commission as well as by the Civil Aeronautics Board."

Congressional News in Brief

By Gerard B. Dobben

SEVEN AGENCIES and Departments of the Government are on record with the Senate Commerce committee as being opposed to the Chosen Instrument in U. S. international air transport operations. Thus it is understandable that when Sen. Pat McCarran put in his substitute bill recently opening up the Community company to railroad stock participation that he might have anticipated at least a favorable report from the agency which has jurisdiction over railroads—the Interstate Commerce Commission. But ICC was the first agency to report back and of all things, it sent a decidedly unfavorable report on the railroad participation angle. Thus it would seem that the rejuvenated S. 326 may have as difficult a path ahead as its predecessor.

Language in the Reorganization bill, H. R. 4129 which passed House and Senate and was sent to the President, leaves the door open for placing the Civil Aeronautics Board under the Interstate Commerce Commission if the President so decrees. The bill names some seven agencies, including ICC, which may not be reorganized under the bill, but adds that the functions of other agencies (such as CAB) can be transferred in whole or in part to those agencies which are exempted from Presidential reorganization. The House and Senate, by a majority vote, could veto such a transfer.

Seventeen Western Senators, lead by Hugh B. Mitchell (D., Wash.) have filed with the Civil Aeronautics Board a letter which asks the Board to originate a commercial air transport route between this country and the Orient from some Pacific northwest city rather than Chicago, across Canada, as the CAB examiners have recommended.

A slight railroad accent was detected in the speech which Rep. Owen Harris (D., Ark.), member of the House Interstate and Foreign Commerce committee, delivered before the New York State Fruit and Vegetable Shippers and Receivers Association in Schenectady December 12. Harris mentioned the billions of dollars which the railroads have spent in building road beds, terminals and purchase of rolling stock and spoke of their "unequal competitive race with Government-aided transport." He said the public interest must be the basic consideration in formulating new transportation policy such as is envisaged by the Committee investigation which is now underway. But it was lack of public interest as evidenced in the "Public be Damned" attitude of some railroad executives of a few decades ago that helped to bring some of the thriving competition that the railroads are experiencing today.

The Congressional Flying club now has 160 members and has set 200 as its goal by Feb. 1. Under the leadership of Rep. Jennings Randolph (D., W. Va.), the club adopted the slogan "There is no partisanship in the Air," at its meeting Dec. 14 when it listened to an illustrated lecture by T. A. Knowles, vice president of Goodyear Aircraft Corp., on the potentialities of the rigid airship in over-ocean cargo and passenger operations.

Rep. Victor Wickersham (D., Okla.) has introduced H. R. 4994 which provides for the extension of the franking privilege on air mail to the Vice President and members of Congress on official mail matter or destined for members of the armed forces. The letters would be limited to one ounce in weight.

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Rescission Measure Lists Funds Marked For AAF and Navy

A re-capitulation of Research and Development funds available to the Army Air Forces and the Bureau of Aeronautics of the Navy for the remainder of the fiscal year, ending June 30, 1946 based on House and Senate action on the Rescission bill follows:

Army Air Forces

Amount requested:	\$245,000,000
Budget approved	115,000,000
House approved	115,000,000
Senate approved	200,000,000
House approved	200,000,000

Navy Bureau of Aeronautics

Amount requested:	\$148,000,000
Budget approved	61,000,000
House approved	61,000,000
Senate approved	148,256,500
House & Senate approved ..	148,256,000

The House cut Senate increase of AAF funds from \$853,000,000 to \$367,000,000. Under the terms of the transferability clause, the \$85,000,000 additional funds provided for Research and Development in the Senate bill can be used provided the Army Air Forces takes this money from two other items "Pay of the Army" and "Operating Expenses." Because men are being discharged more rapidly than was originally anticipated and because contract terminations will be stepped up after the first of the year, conference committee members of both Houses agreed that the AAF would have all the funds it needed to carry on Research and Development projects between now and June 30.

As finally passed and sent to the President, the bill rescinds \$11,799,313,000 of the appropriation for Air Corps-Army instead of \$12,166,313,000 as originally passed by the House, and \$11,313,313,000 as the bill had passed the Senate.

The bill includes \$2,437,006,996 for outstanding obligations, future deliveries and additional requirements of goods and services for the Army Air Forces. Of this total, \$301,617,500 will be used to complete payment for 889 planes, including fighters, very heavy bombers, transports and spare parts. The sum of \$508,784,200 will be used to pay the balance on 1,516 planes, heavy strategic bombers, fighters, transports, a few rotary wing types and spare parts. Approximately \$400,000,000 will be available for production of a number of new development models and planes covering 1,292 fighters, bombers, liaison and cargo planes. The total also includes \$15,000,000 for gliders.

Valentine Luce Gets AIA Job

Valentine A. Luce has joined the Technical Service of the Aircraft Industries Association to work with the National Aircraft Standards Committee in the office of the national chairman. He brings to the committee a broad background in aircraft standards work, having been employed in that capacity with Columbia Aircraft Corp., Republic Aviation Corp., and, most recently, with the Crash Injury Project, Office of Scientific Research and Development.

Gorby Returns to REA

John S. Gorby, formerly Naval Air Traffic Coordinator in the Pacific forward area, has returned to Railway Express Agency and has been named superintendent of public relations.



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CAA Releases Latest Plans for VHF Facilities

Will Aid Manufacturers In Designing Equipment

LAATEST PLANS for VHF radio facilities were released last fortnight by the Civil Aeronautics Administration in an effort to aid manufacturers in the design of radio equipment for the private flyer.

Initially, the report states, private aircraft will use the frequency of 131.7 mc for calling all CAA airway communications stations, and 131.9 mc for calling all airport control towers. It adds, however, that to handle the expected large volume of traffic in the future, two frequencies will eventually have to be used for calling communications stations and three frequencies for calling control towers. These five frequencies will be 200 kc apart, so that the difference in the two frequencies at the extremes of the band will be 800 kc. The CAA states, however, that it is not yet certain the band limits will be 131.1-131.9, so that a sufficient range of adjustment should be provided in the transmitter to permit operation over a band as low as 128.1-128.9 mc.

It points out further that the close proximity of the five frequencies should make it unnecessary to readjust the tuning of RF circuits after being adjusted once for the middle of the band to be used, and should permit frequency changing by a simple crystal switch on the front of the transmitter. It cautions that while only two crystals may be required immediately, a transmitter not providing sockets for five crystals may well become of very limited usefulness in a year or two. The report still further suggests that it would be desirable if the manufacturers could agree on a standard crystal holder and the number of times crystal frequencies will be multiplied to obtain output frequency, so that additional crystals will be procurable as they are needed with a minimum amount of trouble.

108-111 MC Band Set Aside

Turning to receivers, the CAA reports that the 108-111 mc band has been set aside for instrument landing system localizers. The frequencies of 111.1, 111.3, 111.5, 111.7 and 111.9 have been recommended for voice transmissions from airways communications stations, although it is not yet definite that each station will require a transmitter on one of these frequencies, as the voice channel of the radio range alone may prove adequate. Radio ranges will be located in the 112-118 mc band, and airport control towers in the 118-122 mc band. The entire 108-122 mc band will be channeled on a 200 kc basis, starting at 108.1 mc.

While admitting that a certain class of private pilot will desire to receive voice alone and will not want to pay extra for range and localizer reception, the CAA recommends that even such flyers be equipped to receive voice transmissions on the VHF radio range voice channel, and probably on the localizer voice channel as well. This, it states, would require a receiver capable of covering the entire 108-122 mc band, and as there will be 70 frequencies in this band, would seem to make a tuneable receiver the only

practical solution. A low-cost, lightweight, dependable receiver of this type will, the CAA admits, take time to design; and it therefore suggests that a receiver covering the 200-400 kc band must be offered in the interim for use with the VHF transmitter.

Turning to the matter of ranges, the CAA reports that information will be available soon on the design of the converter that must be incorporated in or added to the aircraft receiver for use of the omni-directional range. It added that provisions for reception of the voice channel for either type of range can readily be incorporated in receivers to be built in the immediate future, since the only step necessary is to include reasonable attenuation in the receiver voice output circuit of the modulating frequencies providing the directional guidance. These frequencies are 90, 150 and 1020 cps for the earlier design of range, and 60 and 10,000 cps for the omni-directional type.

A modification of all localizers to permit their use with the same receiver converter unit required for the omni-directional range is under consideration. If it is adopted, frequencies of 60 and 10,000 cps must be attenuated in the voice output of the receiver; if not, the frequencies to be attenuated will be 90 and 150 cps.

All CAA Towers Being Changed

In conclusion, the report states that all CAA control towers are being changed over to civil very high frequencies within the next few months, but they will still be equipped to transmit in the 200-400 kc band as well. While the VHF range installation program is proceeding rapidly, it is still possible that many stations will not be commissioned until the omni-directional equipment is available, so a nationwide system of VHF ranges will probably not be available until about July, 1947. However, should any substantial number of private aircraft be equipped with VHF receivers prior to that time, it is believed that a VHF transmitter operating between 111.1 and 111.9 mc could be provided at each airway communication station. The localizer installation program is also proceeding rapidly, but it will probably be about July, 1947 before all presently authorized installations have been made and the voice channel added.

Western Conference Dodged Issues, Says West-Marquis Head

The Western Aviation Conference, held at Sacramento, Calif., last fortnight, heard allegations from Jack West, head of West-Marquis Co., of Los Angeles and an active member of NAA, that the conference was dodging issues on these four points:

(1) Legislation; (2) what cities should do about airports; (3) gas taxes, and (4) what to do about general objections to airports by the public.

West was outspoken in his criticism of cities which do not have ample airport facilities for personal fliers and as examples cited Oakland, Pasadena and Seattle. Cities will lose substantial revenues by not providing proper airport facilities, he said.

West declared that public officials have an obligation to the business interests and

the people of their communities to see to it that airports are available. West also advocated legislation to require airports to have proper markings for the safety of fliers.

The problem of policing the air occupied considerable of the conference session and it was suggested that airport operators should be deputized. Reckless pilots hamper the development of aviation, speakers pointed out, citing examples where airport opposition had developed as a result of dangerous flying by irresponsible pilots.

Speaking at a conference luncheon, Gen. H. H. Arnold told the delegates that the U. S. must have an aircraft industry capable of rapid expansion in order to insure a permanent peace. "We cannot have just a few experimental planes," declared Arnold. "We must have a manufacturing industry with the necessary tooling and facilities and trained personnel prepared to meet the emergency which we hope does not come."

Simplified Pilot Certificate Provisions Are Extended

An amendment of Part 20.560 of the Civil Air Regulations, extending to certain civilian and military personnel not in the U. S. armed forces the same simplified civilian pilot certificate provisions available to flight personnel of the U. S. armed forces, was promulgated by the Civil Aeronautics Board last fortnight.

The amended regulation permits civilian employees of U. S. ferrying or transport services (ATC, NATS); members of the armed forces of an ally (RAF, RCAF, etc.); or civilian employees of the transport or ferrying services of an allied nation (RAFTC, RCAFPC, etc.) to present evidence of having served in such organizations on solo flying status as a rated pilot or the equivalent for at least six consecutive months after Dec. 8, 1941 toward meeting civil pilot certificate requirements. This evidence, together with the applicant's record of his pilot time, will enable persons in those classifications to meet the "aeronautical knowledge, experience and skill requirements of the Civil Air Regulations for the issuance of a pilot certificate with private or commercial ratings appropriate to" the applicant's service experience. Passing a written examination on Parts 43 and 60 of the CAR, and evidence of an honorable discharge are also required.

Aeronca Prepares Flat Rate Book for Service Operators

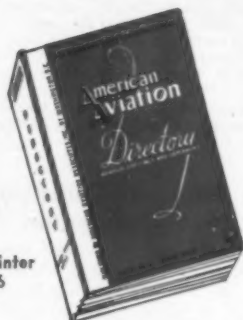
Moving to correct the situation under which aircraft service operators have found it difficult to give accurate cost estimates on repair work, and in many cases have created ill will by making the estimate too low, Aeronca Aircraft Corp. has just prepared a new Flat Rate Manual for use by dealers and operators.

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United States Manufacturers of Aircraft, Engines and Propellers	40 pages	International and Foreign Aviation Organizations and Associations	14 pages
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Colored Light Beams Being Used to Guide Pilots

Westinghouse Approach Angle Indicator Shown

DEVELOPMENT of an approach angle indicator, employing the use of colored light beams, to guide pilots on proper landing approach angles, was announced last fortnight by Westinghouse Electric Corp. Installation of the units has been completed on three runways at Idlewild Airport.

The unit, Westinghouse explained, projects three colored beams toward the approaching plane. The top beam is amber, indicating that the plane is above the proper approach angle. The middle one is green, indicative of a correct approach, and the bottom one is red, signifying the danger of a too-low approach.

The unit comprises a reflector, a 100-watt, single-plane filament, and a series of five clear lenses and three color filters. The lens system not only provides sharp color separation but also is efficient as it achieves a 10 to 1 light magnification, Westinghouse said.

The unit, Westinghouse said, can be used alone or in conjunction with radar and is equally efficient in daytime or at night. Working of the approach angle indicator was explained in this manner:

The indicator sets the correct path for an incoming pilot by forming three wedges of light above the runway—red, green and amber. Having located the air-

port and the runway, the pilot maneuvers his plane into the green pathway of light and can follow it down to a safe landing without even looking at the runway.

If the plane drops too fast, it enters the area where the pilot sees the red beams. If it approaches too high, the pilot sees the amber beams. But if the plane is kept in the green area, the pilot's only worry is to keep the ship properly leveled off for landing.

Westinghouse said that the colored pathways of light are seen only by incoming pilots as they drop toward the runways and that a pilot looking down the runway can see but one color at a time. A flasher system is used to distinguish the beams from airport boundary markers.

For planes equipped with radar, the approach angle indicator provides a visual link between contact and instrument flying, Westinghouse said. The beam units are particularly effective in assisting the pilot in making the last 50 to 100 feet of his instrument landing approach.

Four Oil Companies Agree On Idlewild Distribution

Four major oil companies have agreed to build a distribution system at New York's Idlewild Airport and to operate it through a non-profit company, with all oil companies using the system at cost in selling their products to the airlines, according to Controller Joseph D. McGoldrick who has been conducting the negotiations. The agreement ended a two-year deadlock over the concession between the Gulf Oil Co., first to bid \$3,750,000, and a group of other companies—Texas Co., Socony-Vacuum Oil Co., Colonial Beacon Oil Co., and the Shell Oil Co.—which had bid the same amount.

Gulf has withdrawn "in the interests of harmony," with the condition that it be permitted to sell its products on the same basis as the four companies, and that gas and oil sales to transient planes and to automobiles be let under a separate contract. The city will be paid \$3,750,000 for the concession, less the amount that is bid for the smaller contract. Gulf will open bidding Dec. 21 on the contract concerning transient craft and autos with a minimum bid of \$250,000.

CAA Preparing to Dispose Of 700 War Surplus Airports

The CAA's airport field men are preparing for a heavy new workload in connection with the disposition of some 700 war surplus airports. The disposal program is aimed at encouraging the development of civil aviation and providing for national defense.

While the Reconstruction Finance Corp. will be the actual disposal agency, the CAA will investigate and make recommendations on each property; in light of the civil aviation needs of the community and its ability to undertake maintenance obligations. Recommendations of the CAA will be reviewed by a Surplus Airport Disposal Committee, composed of representatives of the Secretary of War, Secretary of Navy, Administrator of Civil

Aeronautics, the RFC, and Surplus Property Administrator.

Airport disposal will be carried out under terms of SPA Regulation 16, which includes a provision that Federal agencies shall be accorded first priority, state and local governments second priority. Transfer to these agencies may be made without cash payment, while other sales shall be made at fair value described as "the maximum price which a well-informed buyer . . . would be warranted in paying if he were acquiring the property for long-term investment."

House Approves Construction Program at Washington 'Port

Construction of four new hangars, an addition to the terminal building and heating plant at Washington National Airport, and acquisition of a right of way for a new underpass to Route 1, have been approved by the Deficiency Committee of the House of Representatives. An appropriation of \$3,900,000 is recommended for this construction, which is part of a \$16,000,000 expansion program for the airport being considered by CAA.

Hervy F. Law, administrator of the airport, indicated he soon would request approximately \$3,000,000 for a general office building for the airlines. This building, which would contain some 250,000 sq. ft., would actually be rented in advance by various lines before the item is submitted to the Budget Bureau.



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FOR PEACETIME TRAVEL—THE NEW BOEING STRATOCRUISER

World's Largest Amphibian Test Flown at Martin

XPBM-5A Modification Of PBM-5 Flying Boat

THE XPBM-5A, largest amphibian aircraft ever built, was test flown successfully last fortnight by The Glenn L. Martin Co. The 5A is a modification of the PBM-5 Mariner flying boat which did yeoman service for the Navy during the war, and was developed to increase the flexibility of this craft, particularly in adverse weather conditions such as are found in Iceland and the Aleutians.

In converting the PBM from a flying boat to an amphibian little has been lost in the way of range and payload carrying ability—in fact, for land based operations, the payload has actually been increased slightly. Specification figures, as released by Martin, show a design gross weight for land based operations of 64,000 lbs., 8,000 lbs. greater than that of the flying boat version. Total weight added to the aircraft in the form of landing gear and re-enforced supporting structure is 4,500 lbs., leaving a net useful load gain of 3,500 lbs. For water based operations the 5A has a gross take-off weight of 56,000, same as that of the flying boat version, and suffers a net loss in useful load of 4,500 lbs.

The landing gear of the 5A is a special Martin design with single-wheeled main gear retracting into wheel wells in the sides of the hull, and a dual wheeled nose gear retracting into the forward hull bottom. The main wheels operate on a single steel shaft or trunnion and are hoisted and lowered hydraulically. Automatically operated locks hold them in position.

Other modifications incorporated in the 5A include a complete redesign of the hull section forward, with bulkheads reinforced to carry the loads, new floor frames and stronger beams. The flight deck, wings and tail assembly are identical with the PBM-5.

Not only is the XPBM-5A the largest amphibian ever to pass beyond the design stage, but its 64,000 lb. take-off gross makes it one of the largest twin-engined aircraft ever built. The new ship is powered by two Pratt & Whitney R-2800-C engines, the same power plant installation used on the Curtiss C-46



Martin XPBM-5A

Commando, which until the 5A came along was considered to have one of the highest power loadings of any modern aircraft.

Lockheed Unveils P2V 2-Engine Patrol Plane

A new twin-engined patrol plane with a range of more than 5,000 miles, the P2V, was revealed last fortnight by Lockheed Aircraft Corp. with the permission of the Navy Department. Powered by two Wright R-3350 engines similar to those



Lockheed P2V

used on the B-29 and the Constellation, the P2V is described as a peace patrol plane, and the first landbased aircraft ever designed for the Navy for the specific job of patrol.

The P2V is said to perform equally well

at low and high altitudes, and to have a speed in excess of 300 mph. It carries more than 2,000 lbs. of the latest radar equipment, and can transform itself instantaneously into an attack bomber in the event of a surprise attack or unexpected uprising.

Its bomb-bay can be fitted for atomic bombs, two 2,165 lb. aerial torpedoes, four 11.5 inch Tiny Tim aerial rockets, 16 500-lb. bombs, eight 1,000-lb. bombs, four 2,000-lb. bombs, or 12 325-lb. depth charges. Firepower includes six fixed 20 mm. cannon in the nose, twin .50 calibre machine guns in the top turret and a power tail turret. In addition 16 five-inch high velocity rockets can be fired from underwing launchers.

The P2V is a midwing monoplane with a span of 100 ft., overall length of 75 ft. 6 in., and overall height of 28 ft. 1 in. Design gross weight is 58,000 lbs. Power loading is 16.1 lbs./hp and wing loading 58 lbs./sq. ft. Lockheed has a production contract for more than 100 of these aircraft.

AAF Wants Peacetime Force Of 400,000 Men, 8,200 Craft

A peacetime air force of 400,000 men and 8,200 aircraft, embracing 70 combat groups, is included in plans announced by the AAF. An additional 6,000 craft would be needed for the reserve groups which include the National Guard, Organized Reserve, and Reserve Officers Training Corps. The plan, drafted by the air staff and approved by the War Department, does not cover requirements for air involved in a universal training program.

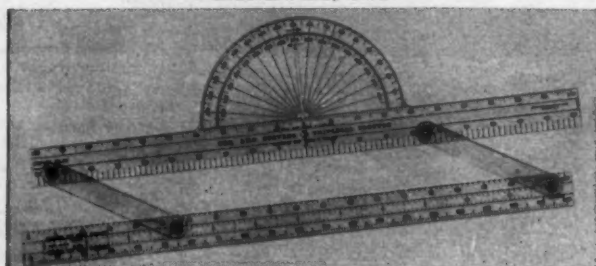
In addition to the 14,200 craft required for the regular and reserve organizations, it was estimated there will be required a reserve of about 3,000 planes flowing into the AAF equipment pool from factories at all times.

The AAF plan sees 25 groups of long-range heavy bombers, 25 fighter groups of all types, five medium and light bomber groups, 10 transport and troop carrier groups, and five tactical reconnaissance groups. This would require 5,000 combat craft, 2,000 training craft, 500 transports, and 700 utility craft. A substantial portion of the 70 combat groups could be used as a mobile striking force in a United Nations Organization's international air force.

Simultaneously it was announced that General George C. Kenny would command a force comprised of a merger between the Far Eastern Air Forces and the Strategic Air Forces in the Pacific. The new Pacific Air Command embraces the 5th, 7th, 8th, 13th and 20th Air Forces. It does not include the 10th and 14th Air Forces in China, or the 11th Air Force, Alaska.

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Shippers Research Division Established by ATA

Step Toward Handling Increased Cargo Volume

CREATION of a Shippers Research Division as a step toward handling greatly increased quantities and varieties of air cargo by U. S. airlines was announced in mid-December by the Air Transport Association. The new unit is expected to give the airlines a direct voice in the formulation of civil air regulations for air shipments, provided the Civil Aeronautics Administration accepts SRD's findings and recommendations on flight safety measures.

Operation of the division will begin as soon as an expert chemist, experienced in both general and laboratory work, can be obtained as director. Arrangements have been made with Underwriters Laboratories of Chicago to carry on experiments for the unit, but research involving pressure chambers and other stratospheric factors will require additional facilities.

Primary duties of SRD at the outset will be to study and prepare regulations involving the safe transportation of hazardous commodities by air. Thus its initial activities will be (1) to promote safety in flight; (2) to protect air shippers by helping to reduce the possibility of loss and damage, thereby eliminating claims, and (3) to give the airlines a clearing house for technical information which will help promote the speedy and safe delivery of airborne goods.

Regulations Sometimes Conflicting

Pointing out that existing CAA regulations, Air Express tariffs and tariffs of the individual airlines are sometimes conflicting and inconsistent, air transport officials agreed that the research would involve large numbers of materials, to determine their acceptability for shipment by air. As a result the division will first study present air cargo items and their relation to altitude pressure changes, corrosive properties of materials with respect to aluminum alloy aircraft and light weight packaging. This program eventually should result in the publication of governmental and tariff regulations, giving both shipper and carrier condensed, accurate and uniform regulations covering airborne articles of almost every description.

"We recognize that many materials may be carried by air if properly packaged, although under present inadequate regulations the carriage of these materials may be questionable," ATA officials stated. "Therefore, all classes of hazardous materials should be studied with a view to the methods of safe packaging and handling. Among the miscellaneous items whose development we feel should be desirable are a vaporproof self-pressure equalizing container for flammable liquids, and possibly a second vaportight can for paints and pigmented materials which fall in the inflammable class."

In recent years the airlines have made good progress in reducing cargo rates by expanding the shipment of various types of commodities. Their air express rates have dropped 22% during the past 30 months, in addition to special express commodity rates 40% under the basic tariff.

Rates for all-cargo service offered at present by four airlines on 34 daily flights over 47,627 miles of domestic routes and six weekly international hops covering 15,994 additional miles, run as low as 23¢ per ton mile.

By its findings the new research division hopes to enable the airlines to lower further the air cargo costs to shippers.

UAL Announces New Ticketing Procedure

United Air Lines announced last fortnight that it will have in effect on its system by Jan. 1 a ticketing and accounting procedure which will expedite passenger handling and loading. Under the new procedure total time to handle a boarding passenger is approximately two minutes vs almost five under the old, United said.

Basic change from the established airline procedure is elimination of the passenger manifest and a general simplification of ticketing and flight check-in.

D. F. Magarrell, United's vice president-passenger service, explained that information previously entered on the manifest, such as the passenger's name, weight and destination, now already is on the ticket from information obtained when the reservation is made.

"The passenger agent, after checking baggage weight, merely calls a departure control clerk in the reservations office to check the reservation and receive a validation number. This number is entered on the ticket, which then becomes the passenger's gate pass," Magarrell said.

Thus passengers are checked in by number, not by name, and United said 21 passengers can be boarded in as little as 50 seconds from the time the flight is called.

A feature of the new passenger-handling procedure is a new-type reservations card, which serves also as a departure control record, manifest for revenue accounting and permanent trip record.

Cards for every flight are mailed at the close of each day by reservations offices to United's central accounting office at Chicago, making possible the completion of accounting records within 10 days after the close of the month. United estimates a saving of at least \$10,000 a year in printed forms alone.

TWA Files New Airfreight Tariff; Would Add 33 Cities

TWA last fortnight filed a new airfreight tariff with the CAB to extend the service to 33 principal cities on the carrier's transcontinental route. The present TWA airfreight service is afforded only five cities—New York, Chicago, Kansas City, Phoenix and Los Angeles.

The new tariff also revises downward the rate structure of TWA's airfreight service on an airport to airport basis. Separate charges are made for pickup and delivery service. As an example, the tariff sets up a charge of \$33.63 for a 100 lb. shipment coast-to-coast in the lowest category. This compares with a previous charge of \$37.95. The tariff was to be effective Jan. 1.

PAA Services to Orient Soon May Be Resumed

Looking toward the early resumption of its services to the Orient, Pan American Airways on Dec. 8 dispatched a survey flight over its central Pacific route to complete ground arrangements and to place personnel.

Pan American said service would be established initially from San Francisco to Manila, via Honolulu, Midway, Wake and Guam. The San Francisco-Honolulu portion of the route now is in operation.

Pan American Officials said that mail and express only would be carried on the initial flight beyond Honolulu, but that full passenger service would be inaugurated when additional aircraft are available. A C-54 is being used on the survey flight.

A second C-54 was to survey Pan American's route to Australasia, which includes stops at Canton Island, Fiji and New Caledonia. Company officials on the Far East flight included L. C. Reynolds, manager of Pan Am's Pacific-Alaska Division; H. F. Kristofferson, operations manager; R. Gleason, communications superintendent; T. K. Morris, passenger service manager; H. K. Graves, operations superintendent; W. Clover, division meteorologist; F. O. Peters, assistant shop superintendent.

Neff Returns to Pan Am; Capehart Takes His Post

Walter H. "Bob" Neff, with Pan American Airways in its public relations department for four years before the war, has returned to the company as public relations manager of the Atlantic division. Neff, who has spent the past three years in various aviation public relations posts with the Navy, attained the rank of commander and was in charge of the aviation section of the public information service when he retired. He was succeeded in this post by Lt. Commander Barney Capehart. Neff will headquarter at North Beach, La Guardia Airport.

Pennsylvania-Central Names Carmichael Executive V.P.

James H. Carmichael, 38-year-old vice president-operations of Pennsylvania-Central Airlines, has been elected executive vice president of PCA. He has been in airline work since 1929, having been a pilot with the old Central Airlines before that company merged with Pennsylvania Airlines to become Pennsylvania-Central in 1936. He was chief pilot, then operations manager of PCA before becoming a vice president in 1940. He also is a member of the airline's board of directors.

"Slim" Carmichael achieved national recognition in 1935 when he brought a plane back safely to its home base after one of its motors had dropped out. For this feat, President Roosevelt awarded him the Air Mail Flyer's Medal of Honor.



B-29 Bomber Becomes C-97 Transport

The B-29 is unquestionably the world's finest bomber . . . its range, speed, load capacity far exceed any other. Boeing engineers and designers decided that this famous ship had peacetime possibilities as a commercial transport if its carrying capacity could be increased. So they put their heads together and came up with the C-97 . . . a double-fuselaged giant with 10,000 feet of cargo space, capable, in wartime, of transporting 100 fully-equipped troops.

Except for this new hull, the C-97 resembles

its B-29 brother in most respects . . . including the tail and the huge wing with its four great Wright 2200-h.p. engines. And just as Chandler-Evans carburetors made a fine wartime record on the Superforts, so is their steady, dependable performance carrying on in this peacetime version.

As new and finer sky giants are developed in the years ahead, CECO products will continue to supply them with the precision and quality that has met the test of war.

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TRANSPORT

Off-Airways Traffic Control Being Studied

The Air Transport Association Operations Committee and representatives of the Civil Aeronautics Administration agreed at a recent meeting in Chicago on a series of tests of various plans that have been suggested for the control of off-airways traffic. They will be made at medium altitude with C-54 aircraft the airlines are using for pilot training.

Included will be a CAA plan calling for a grid of high powered non-directional LF beacons which could be used for ADF operations.

Other items taken up included an ATA request for the CAA to broadcast temperatures and dewpoints in their weather reports, and if this was found impractical because of congestion of facilities, to broadcast this information when the temperature is within 5 degrees of the freezing point and when the spread between the dewpoint and the temperature is 5 degrees or less.

It was generally agreed that two-man flight crews would be sufficient for C-54s in domestic operation, although the CAA felt it might be desirable to require a flight engineer for an interim period while the airlines are becoming familiar with C-54 operations.

The following four-point policy on low frequency aid to navigation was set: 1) The CAA should continue to install low frequency aids to navigation at locations where a need for such aids exists; 2) Omni-directional, two-course and other VHF or UHF aids to navigation should not replace LF until their performance has been fully tested and approved; 3) Duplicate receivers for navigational aids using VHF or UHF are not necessary as low frequency ADF will be available; and 4) Duplicate landing system receivers are not necessary as in case of failure a conventional instrument approach can be made at the radio range or at the ADF locator stations.

Elected to ATA Committee

T. F. Armstrong, Eastern Air Lines, has been elected president and L. B. Judd, Delta Air Lines, and E. I. Whyatt, Northwest Airlines, have been elected vice presidents of the Air Finance and Accounting Committee of the Air Transport Association. During the two-day meeting of the Committee in Dallas, Tex., last fortnight, there were round table discussions on pension plans, physical control of property, training programs for supervisory personnel, tax development and internal auditing.

Rickenbacker Boosts Airships

Giant airships to "round out the wide difference between the speedy plane and the slow-going steamer" are advocated by Capt. Eddie Rickenbacker, Eastern Air Lines president, in a two-page advertisement of the Goodyear Aircraft Corp. which appears in a recent issue of *Life Magazine*.

Operational Problems In Transport Attacked At CAA-ATA Meeting

Considerable progress toward the solution of operational problems confronting the air transport industry has been reported from the recent Chicago meeting of the Air Transport Association's Operations Committee and representatives of the Civil Aeronautics Administration. Subjects discussed ranged all the way from off-airways traffic control to C-54 crew requirements for domestic operations.

On the former point it was agreed to run a series of tests of various plans under consideration utilizing C-54 aircraft at medium altitude. It was pointed out that in off-airways operations positive separation will be almost impossible at the high altitudes to be used in long range operations. The CAA stated its belief, however, that such flights can be controlled in climbs to these altitudes and upon descent by leaving or entering approach channels at a fixed point at a predetermined altitude and then proceeding somewhat as under present traffic conditions.

In the matter of crew requirements for the C-54, it was generally agreed that pilot and co-pilot would be sufficient for domestic operations, but the CAA felt it might be advisable to require the addition of a flight engineer during the interim period while the airlines were becoming familiar with C-54 operations.

A plan calling for a grid of high-powered non-directional LF beacons to be used for ADF operations was outlined by a CAA representative who explained that commercial broadcast stations will aid in this type of navigation.

Five Added to Staff Of Aeronautical Radio

Five more key men have been added to the expanding headquarters staff of Aeronautical Radio, Inc., according to D. W. Rentzel, president. They are: Enoch Ellmore, formerly with the Aviation Section of the War Production Board; Lt. Col. P. W. Sims from the Signal Corps; Lt. Col. Ted Bartlett, likewise from the Signal Corps; Col. T. S. Banes, from the Communications Section, Air Transport Command; and Tom E. Daniels, formerly with the Aviation Section of the Federal Communications Commission.

Ellmore will serve as purchasing agent for Arinc, seeking out equipment for its members and trying to expedite delivery to the greatest possible degree. Col. Sims will spend all his time on plans for the International communications set up. With the Army he established the Signal Corps radio operator training units at Fort Monmouth, N. J., and Camp Crowder, Mo., and later played an important role in the planning and establishment of communications in North Africa and Italy. In civilian life he was with TWA as an engineer in the radio development laboratory. Col. Bartlett has assumed the post of assistant to the president and will likewise devote all his time to international problems, concentrating on the legal and policy aspects. He served as Air Communications Officer in the Signal Corps, and prior to that served on the legal staff of the Federal Communications Commission.

Col. Banes, who was with Bell Telephone Laboratories in an engineering capacity before serving with ATC, will specialize in telephone, teletype and wire communications facilities and other aspects of the increasingly important airport intercommunication problem. Daniels will head up frequency engineering work.

U. S. Airlines Had 507 Transports on Oct. 15

The domestic airlines of this country, as of Oct. 15, 1945, were in possession of 507 aircraft, of all transport types, as compared with 166 in May of 1942 when the Army took over approximately 190 planes for military operations. These 507 planes provide the airlines with 11,058 seats today, compared with 3,416 seats which were available in 1942.

This information is brought out in the final report on "Changes in War Air Service Pattern," released by the Analysis Division, Economic Bureau of the Civil Aeronautics Board.

The report reveals further that the average daily utilization of planes in use today is 1,784 miles compared with 1,138 in May of 1942. Northwest Airlines leads with 2,140 miles per plane, with Eastern second at 1,954, Delta third with 1,931 and Braniff fourth with 1,922. Essair is lowest with 911 miles per plane per day, with Colonial next lowest at 1,157 miles per plane per day.

Approximate daily plane miles flown as of Oct. 15, 1945, was 654,567 compared with 207,838 miles in May of 1942.

CAL to Start Freight Service

Air-freight service was to be inaugurated by Continental Air Lines Jan. 1, according to J. A. Smith, cargo sales manager. The company will participate with Transcontinental and Western Air on joint through rates to all TWA points.

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WE NOW ENTER a new year and want to wish all of you the best of luck . . . The way the airlines are growing you'll probably need it . . . Ain't no one who can't say that 1945 wasn't eventful and hectic . . . If we were naming the personage of the year (can't say "man of the year" or "woman of the year" because we'd be discriminating) we'd be inclined to vote for the poor reservations and traffic clerk . . . There have probably been more people, men and women, in this branch of the business who chewed off all their fingernails, pulled out all their hair, turned to strong drink, etc., during the past year than in any other profession . . . Trying to find space for 50 people on every 21-passenger airplane, having no-shows and go-shows in your hair, having the weather sock in when you've got about 500 passengers on your hands isn't the easiest way to make a living . . . You have our sympathy . . . Personally, we'll try to stay out of your hair . . .

All great minds run in the same channels, it says somewhere . . . Therefore, Jim Cobb, Delta's publicity director, and Dick Rummel of United must have great minds . . . As you can see from the accompanying art, we have 16 beautiful girls 16 . . . Ten of these are Delta stewardesses (right) and six work for



United, and all of them are just as tickled as can be because they are trying on their first postwar nylons . . . These pictures arrived in our office on the same day . . . This either indicates collusion, coincidence or great minds etc. . . Or we might even speculate that United and Delta are going to merge (don't laugh—we've heard of merger rumors that got started on less than that) . . . We must say that Jim Cobb did the better job of getting his picture out, though, because he gave not only the girls' names but also their addresses (these we will furnish upon receipt of a small service charge) . . .

There have been many people in the lower echelons of the air transport industry during the past few years who have griped about low salaries and long hours . . . Some of these guys had justifiable complaints, but nevertheless they stuck with the industry not only because it was glamorous but because they believed in its future . . . Others (and you find them in every industry) were chronic grippers who didn't have anything on the ball anyway . . . We would direct the first group's attention to a recent statement by Eddie Rickenbacker, president of Eastern: "During the next few years promotions will be available on an unprecedented scale. They will not be automatic. The company needs men and women who will take responsibility, who will establish leadership, and who will show ability to handle the jobs of management" . . . This no doubt goes for other airlines as well . . . Maybe your hard work is going to pay off . . .

Now that a lot of fellows are coming back to the airlines with big military titles, how are you going to address them? . . . Are you gonna call them Col. Jones, Gen. Brown, etc.? . . . American Airlines' houseorgan, FLAGSHIP NEWS, wondered about this, so a letter was sent to C. R. Smith, chairman of the board, who ought to be in a position to answer (he was a major general, ATC) . . . C. R.'s answer was interesting and we want to quote it in full: "You ask if the company has a policy concerning the continued use of military titles after the period of military service is over. This is a matter which each individual will want to decide for himself; it is a personal and not a corporate decision. Many of our associates served with distinction in the several branches of the service. Their courage and good work reflects credit upon themselves, upon their country and upon this organization, with which they are now associated. They are proud of their accomplishments and we share that pride with them and with the members of their families. The period of military service has now been concluded and we look forward to constructive accomplishments in civil life and in civil aviation. So far as I am personally concerned, the time when I was entitled to a military title was interesting and colorful; that, however is now over. I am glad to have had the opportunity of serving and I am glad to be back with American. 'C. R. Smith of American Airlines' suits me for the future.'" . . .

ERIC BRAMLEY.



Sullivan

Turner

Stephens

Executive

W. Fiske Marshall, general operations manager of Northwest Airlines, has been named vice president in charge of operations, succeeding George E. Gardiner, who has resigned.

Herbert C. Dobbs, formerly traffic manager of Pan American Airways' Latin Division has been named vice president-traffic of National Airlines.

Operations

Capt. John W. White, USNR, has been appointed manager of the Alaska Region of Pan American Airways' Pacific-Alaska Division, succeeding J. V. Roscoe, who has been assigned to San Francisco as assistant manager of the division.

Kenneth C. Radcliffe, associated with Western Air Lines since 1943, has been named station manager at Palm Springs, Calif.

Traffic

Edward S. Sullivan, formerly sales manager of Pennsylvania-Central Airlines, has joined the staff of Transcontinental & Western Air as manager of the Agency and Interline Department.

V. K. Stephens has been named Washington regional traffic manager for Pennsylvania-Central Airlines. He was formerly PCA station manager in Washington.

Lt. Col. Robert L. Turner has rejoined Eastern Air Lines after three years with the Air Transport Command and has been appointed Northern Division manager.

Capt. Scott Jenkins, veteran of 48 missions over Germany and former University of Detroit football star, has joined the traffic staff of Northwest Airlines in Detroit.

Lt. Cmdr. Chase Wason, USNR, former Minneapolis DTM for Mid-Continent Airlines has been named Kansas City DTM. He was in the Navy three years.

Maj. Allen Aldridge, formerly traffic manager for the Houston district of Braniff Airways, has returned from the AAF to become DTM for Braniff in Memphis. Maj. Douglas Wood, Dallas DTM for Braniff for five years before joining the ATC in 1942, has returned to his former position.

Miscellaneous

Buell Patterson, until recently publicity director of the Airplane Division, Curtiss-Wright Corp., has returned to American Airlines as assistant director of public relations.

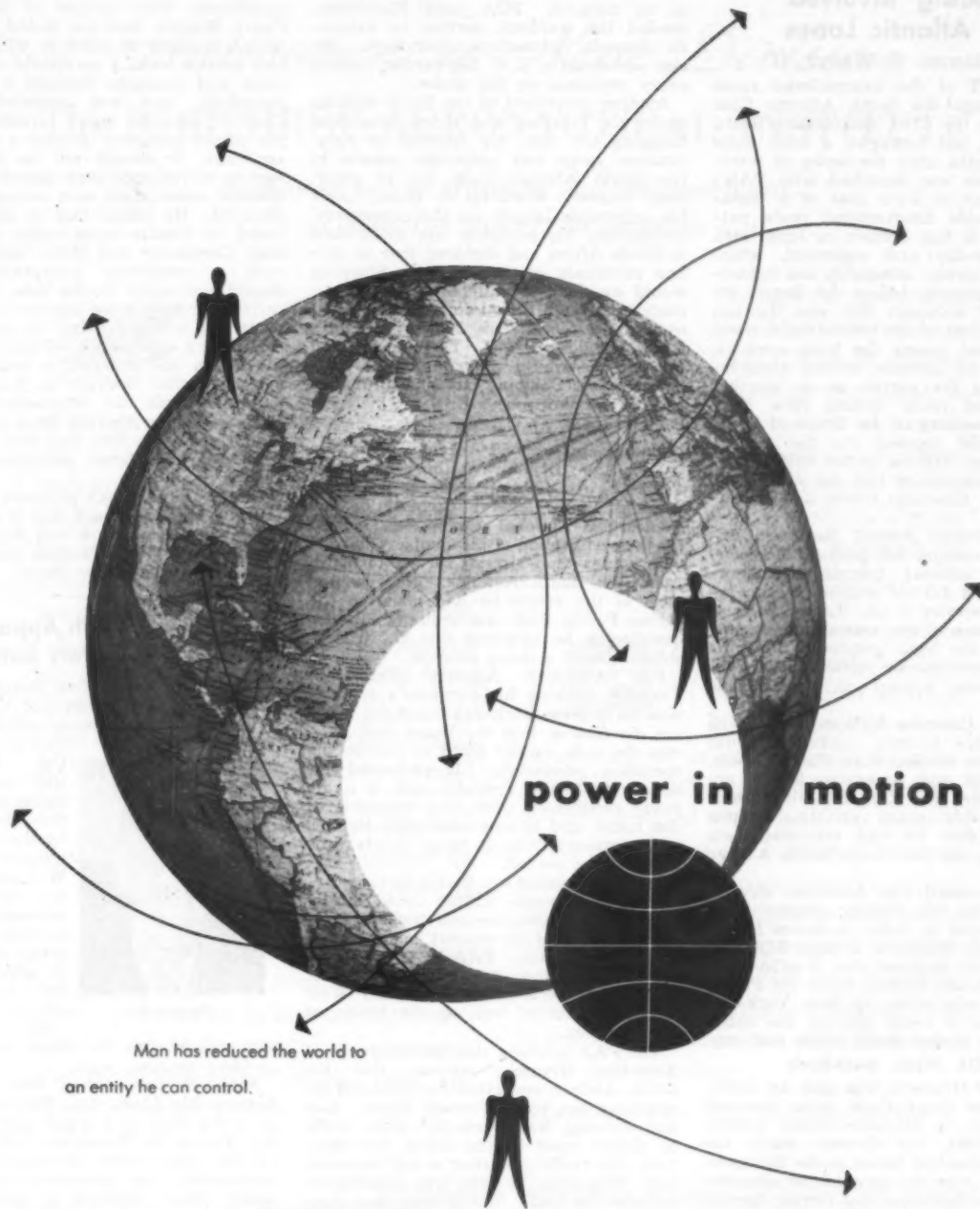
Lt. Col. John T. Carlton, former Atlanta newspaperman and veteran of 37 months Army service in the Asiatic-Pacific theatre, has been appointed manager of the newly created news bureau of Pennsylvania-Central Airlines.



White

Wason

Wood



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Last of International Route Cases Goes to CAB

Proceeding Involved South Atlantic Lanes

By DANIEL S. WENTZ, II

THE LAST of the international route proceedings—the South Atlantic Case—lay before the Civil Aeronautics Board for decision last fortnight, a little more than 18 months after the series of international cases was launched with CAB's announcement in June 1944 of a tentatively desirable international route pattern for U. S. flag carriers in June, 1944.

The three-day oral argument, which brought air carrier, steamship and lighter-than-air applicants before the Board, indicated that although this was the last and the smallest of the international cases, it was by no means the least complex. There was, for instance, serious disagreement among the parties as to whether the projected route linking New York with Johannesburg in the Union of South Africa should proceed via the Azores, serving West African points enroute, or whether it should be laid out via Puerto Rico, South American points and Ascension Island.

Public Counsel Russell Bernhard expressed the opinion that perhaps the economic and national interest considerations involved did not warrant the operation of the service at all. Lastly, because of the presence of two steamship company applicants, the legal questions revolving around surface carrier participation in air services were argued at considerable length.

American Overseas Airlines, through its counsel Leslie Craven, backed a South African route via San Juan, Port of Spain, Belem, Natal and Ascension Island, arguing that the New York-San Juan traffic would provide much of the revenue needed to offset the high estimated costs of operating the thin-traffic South African extension.

Craven accused Pan American airways of supporting the slightly shorter route via the Azores in order to secure for itself a subsidy estimated at some \$1,200,000 annually. He declared that if AOA were given the South African route via Puerto Rico with sole rights to New York-San Juan traffic, it could operate the entire service at a modest profit before mail pay.

AOA Wants Brazil-Rome

American Overseas was also an applicant for the Brazil-Paris route included by CAB in its tentative route pattern of July, 1944, but Craven asked the Board to substitute Rome as the European terminal to ease the competitive situation in which an American flag carrier operating this segment would probably find itself. In commenting on the failure of Pan American to apply for the Brazil-Paris link, Craven asserted that it had not asked for the route because it planned to operate it through one of its Latin American subsidiaries.

Charles H. Murchison, Pennsylvania-Central Airlines' attorney, told the Board that his company also believed the South African route via San Juan and Ascension Island would best service the national interest. Murchison declared that the 9000-odd mile route between New York and Johannesburg should tap as much in-

termediate traffic as possible to contribute to its support. PCA, said Murchison, needed the southern service to balance its domestic wintertime operations. He also advocated a U. S. flag carrier linking every continent on the globe.

Another proponent of the South African route via Trinidad and Brazil was Seas Shipping Co., Inc., an operator of combination cargo and passenger vessels in the South African trade for 10 years. Seas' counsel, Winthrop O. Cook, based his arguments largely on the commercial connections his company has established in South Africa and declared that an airline certificate granted to Seas Shipping would enable it to build up its cargo operations through the stimulus to trade that easier and more rapid access to South Africa would provide. The surface and air services would not conflict, he said, because Seas Shipping has been primarily a cargo carrier.

U. N. Airships Makes Plea

Making his second recent appearance before the Board, Wellburn Mayock, President and General Counsel for U. N. Airships, and General Counsel of the Democratic National Committee, argued for the certification of his company to provide lighter-than-aircraft service to South Africa via Latin America. He repeated most of the points he had made in the earlier Pacific Case oral argument. Under questioning he admitted that U. N. Airships was not a going concern.

Pan American Airways' Henry J. Friendly, backing his company's application for a New York-Johannesburg route via the Azores, told the Board that PAA was the only carrier fitted to handle the operation adequately. It pioneered air service to Africa, Friendly said; it is already certificated over long segments of the route, and it now maintains stations and representatives at many points proposed to be served.

Friendly pointed out that a surface carrier or a domestic airline could hardly afford the maintenance and traffic organizations required to support an operation of some 9000 miles. PAA he said was the only party to the case proposing a route that would serve the Congo and West African points as well as the Union of South Africa.

The PAA attorney attacked proposals of American Overseas Airlines that the South African operation be bolstered by operating the route through Puerto Rico and allowing New York-San Juan traffic to absorb some of the deficit the long-haul thin traffic operation would accumulate. This plan, he said, was unworkable because the traffic to and from San Juan could not be made dependent upon space available on planes returning from the long South African flight, and because New York-San Juan traffic would be made through higher fares to subsidize the South African operation.

One of the high points of the argument occurred when Edwin S. Murphy, counsel for the American South African Line, Inc. (ASA), a steamship operator, explained to the Board an apparently novel interpretation of the decision of the U. S. Circuit Court of Appeals regarding the applicability of Section 408 of the Civil Aeronautics Act in proceedings in which

surface carriers are applying for airline certificates. This opinion of the Circuit Court, Murphy told the Board, was only meant to apply to cases in which a surface carrier seeks a certificate of convenience and necessity through a corporate subsidiary, and was intended by the Court to give the Board jurisdiction over the parent company of such a subsidiary applicant. It should not be applied to surface carrier applicants applying for certificates under their own names, Murphy declared. He added that in his opinion, based on similar cases under the Interstate Commerce and Motor Carrier Acts, such a restrictive interpretation also should not apply in the case of surface carriers proposing air service over a new route not served by any air carrier.

Murphy's explanation of this legal hurdle which has troubled a long series of surface carrier lawyers in the past, apparently made an impression on the Board. Member Oswald Ryan commented that this was the first time that this interpretation had been presented to the Board.

In explaining ASA's proposed operation, Murphy told the Board that it planned to fly between New York and Johannesburg via Bermuda, Villa Cisneros and Leopoldville, using the Martin Mars.

Colonel Duckworth Appointed Head of CAB Safety Bureau

The Civil Aeronautics Board has announced the appointment of Col. Joseph B. Duckworth as director of the Board's Safety Bureau.



Duckworth

Col. Duckworth will assume the duties of the position left vacant by the recent resignation of Jesse W. Lankford, who has asked to be released from his wartime appointment as director, in which capacity he has served since December 1942. Lankford

will remain with the Board in charge of accident analysis work.

After 10 years as a first pilot with Eastern Air Lines, Col. Duckworth went on active duty as a major with the Army Air Forces in November 1940. During his five years with the Army he served successively as operations and flying safety officer, director of training, post executive officer, post commander and wing commander. In all this work he was concerned directly with safety of flying, particularly through the development of a new and improved system of instrument flying training for the Army Air Forces, which was evolved, tested, and written by him and men working under his direct supervision. In addition to this, as president of the AAF Instrument Flying Standardization Board and as a member of the All Weather Air Forces Board, Col. Duckworth wrote many regulations relating to safety of flight in military operation.

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SILA, KLM Present Arguments For Transatlantic Services

By FRANK M. HOLZ

SWEDISH Intercontinental Airlines (SILA) and KLM Royal Dutch Airlines, both applicants for transatlantic services to the United States, recently presented their case at hearings before the CAB. In both instances there was only one main witness: for the Swedish company, Tore Nilert, U. S. representative for SILA, and for KLM, L. H. Slotemaker who has been General Secretary for the Dutch airline for over 15 years.

Nilert revealed that the much-discussed transatlantic pooling arrangements among the airlines of Sweden, Denmark, and Norway had not yet been formally concluded. A formal signing is expected by early spring, but SILA will begin operations independently. Since 1939 Scandinavian air interests have agreed that, in the event the three countries fly to the United States, "an arrangement is to be worked out to schedule flights to avoid uneconomic operations," Nilert stated.

Nilert Questioned at Length

Public Counsel questioned Nilert at some length on the working agreement between the two Swedish companies, SILA and ABA. According to the agreement, ABA "shall manage international traffic on behalf of SILA." Nilert explained that SILA officials make the relevant decisions and retain jurisdiction, but ABA's traffic and other personnel carry out the detailed handling of SILA schedules, traffic reports, tickets, administration ration, etc. The transoceanic aircraft, owned by SILA, are also to be serviced by ABA.

American Overseas Airlines, Inc., soon will conclude agreements with both SILA and KLM providing for a mutual exchange of technical and traffic facilities, but not involving agreement on schedules or any pooling arrangements, it was testified at the two hearings.

Slotemaker of KLM also disclosed that Sumner Sewall, president of AOA, has recently been in the Hague to arrange for the issuance of a foreign air carrier permit by the Netherlands Government.

The KLM hearing combined two separate applications—for a route Amsterdam-New York and for the route between Miami and Willemstad, Curacao, in the Netherlands West Indies (Dockets 1277 and 1187).

KLM has contracted for four DC-4s and four Constellations. The Dutch transatlantic service will begin with a Constellation sometime in May, but there will be no restrictions on AOA services meanwhile. Slotemaker stated that the Netherlands have always advocated freedom of the air and now permits a number of national services to Holland for which KLM cannot supply a Dutch counterpart for some time.

V. Rock Grundman, public counsel at both hearings, questioned the applicants on the stock control of the companies. Testimony and exhibits showed that control of each company was vested in the hands of nationals. Foreign holdings in 70% of the stock of SILA is "legally impossible," Nilert stated. The remaining

30% is held by "excluded Swedish entities"—Swedish companies whose charters do permit stock holdings by non-Swedish interests. Although permitted, there are often few shares or none in foreign hands, and such is the case with the Swedish-America Line, a shipping company which owns most of the "excluded" block of SILA stock. It was also noted that ABA holds no stock in SILA, although two directors of each line are represented on the board of the other.

Whereas SILA is privately owned, a majority of KLM stock is held by the Netherlands Government, and under a contemplated increase of capitalization to 30,000,000 guilders, the government would acquire new shares to retain its financial control. (2.6 guilders equal \$1 U. S.). Companies holding KLM stock are all Dutch-controlled. Slotemaker testified, giving percentages by nationality of the holdings in the principal companies.

KLM is now operating 14 leased C-54s under contract to the Netherlands Government on a twice-weekly service between Amsterdam and Batavia, Java. The service will be put on a daily basis by mid-February, Slotemaker said.

There is now no direct service between the Netherlands and the Netherlands West Indies and KLM is studying the possibilities of such service. No decision has been made but a possible route might be Amsterdam-Lisbon-Dakar-Belem-Paramaribo-Curacao. Asked whether this would be a through route to the U. S., Slotemaker answered that it was not so contemplated.

Effect of Non-Stop Operations on Route Pattern Questioned

A serious concern over the economic and competitive effects non-stop operations might have on the national route pattern was expressed by members of the Civil Aeronautics Board last fortnight in questions asked during the course of an oral argument on American Airlines' proposed Oklahoma City-Phoenix and Oklahoma City-Tucson non-stops.

All four Members, and Member Harilee Branch most particularly, showed in their line of examination of the air carrier attorneys present a concern over the possibility that the present state of non-stop applications, which will probably increase rather than diminish, may, if approved, render the strict concept of a "route" as outlined in a carrier's certificate almost wholly obsolete. This possibility was explored during the Board's questioning of American's attorney Robert W. Griffith and TWA's James K. Crimmins.

Opening the argument, Griffith told the Board that an Oklahoma City-Phoenix non-stop would permit American to clip 76 miles and 45 minutes off its present schedules when four-engined equipment becomes available for direct flight course

operation. The Oklahoma City-Tucson non-stop, he said, would save 27 miles. Griffith declared that the time is rapidly approaching when direct flights will be widely made without reference to the present Federal Airways System which grew up along with the strict route pattern concept. He asserted that the inherent advantages of air transportation could be fully realized only if the airplane is not tied to any geographical route concept but is allowed to seek the shortest possible course when through supporting traffic is available.

In questioning Griffith, Member Branch developed to some length a theory that a widespread granting of non-stops might easily result in superimposing on the existing certificated route pattern a secondary system of through flight courses. Branch's line of inquiry apparently indicated that he was concerned over what this secondary pattern might mean competitively, and what navigational and safety problems might result from a general abandonment of the Federal Airways System.

James K. Crimmins, attorney for TWA, viewed proposed non-stops as parts of an American scheme to invade the middle territory through which TWA has historically operated. He expounded the theory that each transcontinental carrier has a separate function and a separate area in which to operate, and accused American of trying to retain its southern transcontinental and at the same time to force itself into a position of being able to secure a share of TWA's middle route business.

Aerovias Braniff—CMA Fight Up Before Board January 7

The first official action of the Civil Aeronautics Board on the Aerovias Braniff-Compania Mexicana de Aviacion fight will be taken at a hearing Jan. 7 on Aerovias' application for a temporary foreign air carrier permit authorizing it to stop at Laredo, Texas, instead of Nuevo Laredo, Tamps., Mexico.

The hitherto local inter-company quarrel developed this international aspect when CMA, according to Aerovias, refused the latter permission to use the CMA-owned airport and facilities at Nuevo Laredo. In retaliation, Aerovias Braniff then asked CAB to let it use the Laredo field on the U. S. side of the border to conduct its operation between Mexico, D. F., and Nuevo Laredo, via Ciudad Victoria, Tamps. At a prehearing conference on Aerovias' application, the company's attorney stated that CMA had also refused Aerovias permission to install its own facilities at the Nuevo Laredo airport.

Granting Aerovias temporary permission to use the Laredo field was necessary to provide connections with Braniff Airways domestic route system, it was stated. The company's counsel also alleged at the prehearing conference that CMA's refusal to permit it the use of the Nuevo Laredo airport had caused a state of emergency in its operations which seriously imperilled its connecting service with Braniff Airways.

CMA, will seek to intervene, opposing Aerovias' application on the ground that it might prejudice an earlier application of CMA for permanent authority to serve Laredo.



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CAB Proceedings

(A Summary of Applications Filed, Orders Issued, and Future Actions of the Civil Aeronautics Board.)

Applications:

American Air Express Corporation, 522 Fifth Avenue, New York, 18, N. Y., for a certificate authorizing scheduled express and cargo service over 8069 miles of routes linking Boston and Los Angeles; New York and Miami; Boston and Chicago; New York and Chicago; Washington and Omaha, Neb.; and Seattle and San Diego, via various intermediate points. (Docket 2153).

Edwin F. Brinkworth, Anchorage, Alaska, for a permanent or temporary certificate or exemption order authorizing non-scheduled passenger and property service to all points within a 150-mile radius of Homer, Alaska, and charter trips between all points in the territory. (Docket 2154).

James Walker Case, 711-D Buena Vista Avenue, Alameda, Calif., for a permanent or temporary certificate authorizing scheduled mail, passenger and property service over a 420-mile route between the terminal points Redding, Sacramento, Fresno and Oakland-San Francisco, Calif., via the intermediate points Chico, Marysville, Grass Valley, Stockton, Lodi, Modesto, and Merced. (Docket 2158).

Roy H. Curtiss, Fairbanks, Alaska, for a permanent or temporary certificate or exemption order authorizing non-scheduled mail and cargo service between Seattle, Wash., and Nome, Alaska, via Ketchikan, Juneau, Anchorage and Fairbanks, and other points within a 250-mile radius of the routing. (Docket 2152).

Dartmouth Airways, c/o Richard W. Putnam, 90 South Main Street, Hanover, N. H., for a permanent or temporary certificate authorizing scheduled mail, passenger and property service from the airport at West Lebanon, N. H., to New York via Claremont, N. H., Springfield, Vt., and Springfield, Mass. (Docket 2156).

Golden State Airlines, c/o Robert S. Anis, 3452 Park Place, N. W., Washington, D. C., for a permanent or temporary certificate authorizing air transportation of property and/or persons and mail over a 1115-mile circle route beginning and terminating at Los Angeles and serving Bakersfield, Fresno, Sacramento, Eureka, Oakland and Santa Barbara, Calif. (Docket 2159).

Norfolk Northern Air Lines, 25th Street and Monticello Avenue, Norfolk, Va., for a permanent or temporary certificate authorizing scheduled passenger, property and mail service on routes between Norfolk and Baltimore, Norfolk and Philadelphia, and Norfolk and New York. (Docket 2151).

Pan American-Grace Airways, for an exemption order authorizing mail, passenger and property service to and from Rioabamba, Ecuador, pending action by the Board on Panagra's application for permanent certification of Rioabamba. (Docket 2160).

Sooner Airlines, Inc., 1447 N. W. 33rd Street, Oklahoma City, Okla., for a permanent or temporary certificate authorizing scheduled mail, passenger and property service, including pick up, over 2850 miles of routes radiating from Oklahoma City to Fort Smith, Ark., Springfield, Mo., Shreveport, La., Dallas, Tex., Elk City, Okla., Amarillo, Tex., Pueblo, Colo., and Wichita, Kans., via various intermediate points. (Docket 2157).

United Air Lines, for amendment of its certificate for Route 66 to include Akron and Youngstown, Ohio, Harrisburg and Scranton-Wilkes-Barre, Pa., and Providence, R. I., as intermediate points. (Docket 2150).

Wood Flying Service (Wilfred S. Wood), Naknek,

Calendar:

Jan. 2—Hearing on Pan American Airways' application for amendments to its trans-Atlantic certificates. (Docket 2076). 10 a. m., Conference Room "C", Departmental Auditorium. Examiner Rots I. Newmann.

Jan. 4—Prehearing conference on Braniff Airways' application for consolidation of its Routes 9, 15 and 50 (Docket 1154); and TWA's application to consolidate its Routes 2 and 44 (Docket 2142-portion). 10 a. m., Room 3899, Commerce Building.

Jan. 7—Hearing on the application of Aerovias Braniff, S. A., for a temporary foreign air carrier permit. (Docket 2107). 10 a. m., Conference Room "C", Departmental Auditorium. Examiner Charles J. Frederick.

Jan. 7—Oral argument in the New England Case. Docket 399 et al.. 10 a. m., Room 5042, Commerce Building.

Jan. 10—Hearing on American Airlines non-stop proposals in Docket 2136. Tentative.

Jan. 14—Hearing in the American Airlines et al. consolidated route consolidation case. (Docket 932 et al.). Tentative.

Jan. 14—Hearing on Colonial Airlines' application for designation of Newark, N. J., as a co-terminal on its Route 72. (Docket 2144). Tentative. Examiner Lawrence J. Kisters.

Jan. 21—Hearing in the American Airlines-Mid-Continent Airlines Merger Case. (Docket 2068). Tentative.

Jan. 28—Hearing in the Middle Atlantic Area Case. (Docket 674 et al.). Postponed from Jan. 14. Examiners Charles J. Frederick and Richard A. Walsh.

Feb. 4—Hearing on Pan American Airways' Latin American Division Mail Rate Case. (Dockets 1593 and 1909). Examiners William J. Madden and J. Earl Cox.

Feb. 11—Hearing on the Board's investigation of an Agreement between Pan American Airways and Panair do Brasil, S. A. (Docket 2032). Examiners William J. Madden and J. Earl Cox.

Feb. 14—Hearing on the application of Arizona Airways and Transcontinental & Western Air for approval of TWA's sale of its certificate for Route 38 to Arizona Airways. (Docket 2005). Examiner J. Earl Cox. Tentative.

Feb. 18—Hearing in the Kansas City-Memphis-Florida Case. (Docket 1051 et al.). Tentative.

Feb. 18—Hearing in the Board's investigation of the Universal Air Travel Plan. (Docket 1939). Examiner Charles J. Frederick. Postponed from Dec. 17.

Mar. 11—Hearing in the Boston-New York-Atlanta-New Orleans Case. (Docket 730 et al.). Examiners Thomas L. Wrenn and Lawrence J. Kisters. Tentative.

April 1—Hearing on Pan American Airways' application for U. S. domestic routes. (Docket 1803). Tentative.

Alaska, for a permanent or temporary certificate or exemption order authorizing non-scheduled charter transportation of mail, passenger and property within the Territory, with bases at Egegik and Ugashik, Alaska. (Docket 2161).

Orders:

4208—Authorizing Eastern Air Lines to operate non-stop between Charlotte, N. C., and Jacksonville, Fla., on Route 6.

4231—Permitting Woodley Airways to intervene in the Alaskan certificate proceeding on the application of William V. Smith, doing business as Circle Air Trails, in Docket 2034.

4242—Authorizing Pan American Airways, by a temporary exemption order expiring March 31, 1946, to operate landplane service between New York and Lisbon via Gander Airport, Newfoundland, and Shannon (Rineanna) Airport, Eire, and temporarily to suspend service to Horta, the Azores. (Docket 2146).

4255—Dismissing the application of Expreso Aereo Inter-Americano, S. A., in Docket 1787 at the carrier's request.

4254—Approving an agreement between Pennsylvania-Central Airlines Corp., and American Airlines, Inc., relating to the sublease of space in a radio transmitter site at Williamsville, N. Y. to PCA. (Agreement C.A.B. No. 457).

4257—Authorizing Braniff Airways to intervene in the American Airlines, et al., consolidated route consolidation proceeding. (Docket 932 et al.).

4258—Consolidating the application of Royal Dutch Air Lines (KLM) for an Amsterdam-New York foreign air carrier permit (Docket 1277) with the company's application for a Willemstad, Curacao, N. W. I.-Miami foreign air carrier permit (Docket 1187), for simultaneous hearing.

4259—Approving an authorization of the Reconstruction Finance Corporation for a \$55,000 loan to Alaska Coastal Airlines.

4260—Approving an agreement between Pennsylvania-Central Airlines and American Airlines relating to the air-conditioning of American's planes at Knoxville, Tenn. (Agreement C.A.B. No. 450).

4261—Authorizing Pan American Airways to serve Lisbon, Portugal, through the use of the Portela de Sacavim Airport.

4262—Permitting Chicago and Southern Air Lines to intervene in the American Airlines et al., consolidated route consolidation proceeding. (Docket 932 et al.).

4267—Authorizing Northern Airways by temporary exemption order to perform the air transportation service authorized and required under the certificate of convenience and necessity issued to Charles Harold Gilliam, pending final action by the Board on Northern Airways' application for approval of its acquisition of Gilliam's property and certificate. (Docket 2133).

4276—Denying a motion of Eastern Air Lines requesting removal from the Mississippi Valley Case of National Airlines' Dockets 1163 and 1394.

4278—Authorizing the City of Washington, Pa., to intervene in the Great Lakes Area Case (Docket 535 et al.).

4279—Reissuing the trans-Atlantic certificate formerly held by American Export Airlines, Inc., to reflect the company's change of corporate name to American Overseas Airlines, Inc.

4280—Cancelling the temporary New York-Lisbon and New York-Foyes certificates held by American Export Airlines, Inc. (Dockets 238 and 694).

4281—Consolidating with the Middle Atlantic Area Case (Docket 674 et al.) the following applications: Pennsylvania-Central Airlines, Dockets 2108, 2101, 2102, 2103, 2104 and 2105; Dickinson Airways, Inc., Docket 2121; P. G. Walker, doing business as Mason-Dixon Lines, Docket 2095; Maryland Airlines, Inc., Docket 2084; Columbia Airlines, Inc., Docket 2083; Kendall W. Everson and John T. Daugherty, Docket 2137; and Coastal Air Express, Inc., Docket 2138.

4282—Authorizing the cities of Syracuse and Watertown, N. Y., Philadelphia and Johnstown, Pa., and the Counties of Allegheny and Lackawanna, Pa., to intervene in the Middle Atlantic Area Case, and denying petitions of the Baltimore Association of Commerce and the Chamber of Commerce and Board of Trade of Philadelphia to intervene in the same proceeding. (Docket 674 et al.).

4291—Denying the City of Springfield, Mo., permission to intervene in the Cincinnati-New York-Additional Service Case. (Docket 221 et al.).

4292—Dismissing the application of National Airlines in Docket 2129 at the company's request.

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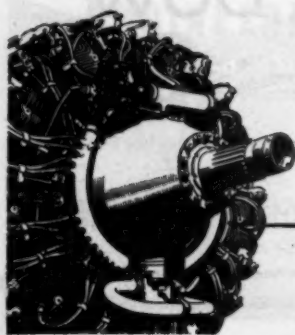


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'Stocking Up on Transports While Cheap Unwise'

American Engineer Says It Won't Pay

AIRLINE management is finding that it will not pay to "stock up" on aircraft while they are cheap, R. Dixon Speas, assistant to the vice president, engineering, American Airlines, told members of the National Airport Club in Washington recently.

Discussing the new aircraft for 1946 with respect to their economical and operational characteristics, he pointed out that the statement which puts an airline in the black or in the red is that of total operating cost per month or per year, and that getting aircraft absolutely free would reduce total operating costs less than 10 percent.

By way of illustration, he drew a comparison between two hypothetical airlines—one operating DC-3s which it purchased for \$40,000 each, and the other operating modern 1947 medium transports for which it paid \$250,000 each. For each to operate 12,000 miles per day, the first would have to have two additional ships and would have a direct operating cost, assuming a 60 percent load factor, of 238c per passenger mile as against 1.25c per passenger mile for the second. The net result, he said, would be that if the first airline broke even, the second would make a \$1,200,000 profit, while if the second only broke even, the first would suffer a \$520,000 loss, all factors other than equipment being the same.

Turning to operational aspects, he pointed out that one of the most drastic changes in the new aircraft is in their operating weight characteristics. The difference between landing and take-off gross weight for the DC-6, he pointed out, will be 20,200 lbs., for the Constellation 15,000 lbs., and for the DC-4 9,500 lbs. as against only 1,200 lbs. for the DC-3. The most evident result of these characteristics, he said, will be the con-

trol of more airline take-offs by the maximum allowable landing gross weights rather than the take-off gross weights.

He also emphasized the matter of load distribution, stating that the DC-4 is currently restricted to 58,000 lbs. unless the additional weight is loaded in the form of fuel in the wings. Even this must be loaded to provide an even distribution along the wing, and for this reason it is not possible to carry maximum fuel in the

DC-4 with some wing tank installations.

The new aircraft for 1946, he said, promised to be the most reliable ever developed, but he added that several related operational problems still remain unsolved. He pointed to airways traffic control of a positive and infallible nature together with full instrument landing equipment as two absolute musts if air transportation is to become the greatest transportation medium in the world.



A SIX engine jet lightplane is expected to fly shortly on the Pacific Coast. The aircraft is reportedly a Culver Cadet which will be powered by six Giannini resonance jets. The use of the six engines is said to overcome the vibration problem through a cancelling out process, but that still doesn't answer the problem of fuel consumption, or take-off thrust for that matter.

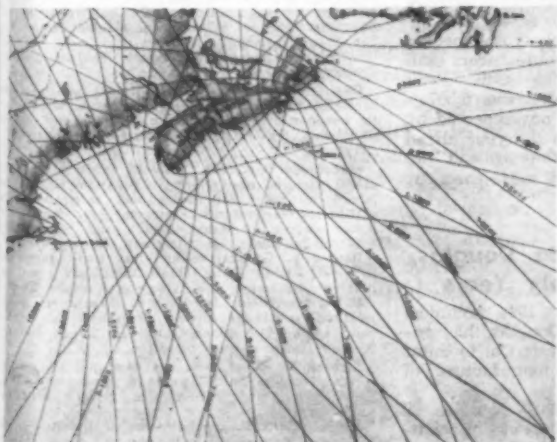
Far more likely for the personal aircraft is a new 100 hp. combined aircraft and automotive engine which Jack & Heins already has running, and which will probably be seen in a new automobile within the next three to four months. It is reported to have a displacement of less than 100 cu. in., to weigh 110 lbs. and to develop 100 hp at 7,800 rpm with a fuel consumption of only .39 lbs./hp/hr. Unusual construction features are understood to include slide valves and a crankshaft of simplified design. Light metals including magnesium and 75ST are believed to have been used extensively, and if the automotive use works out, it may sell for as little as \$150.

Look for Bellanca Aircraft Corp. to announce some rather startling performance figures for its new postwar four-place Cruisair very shortly.

The new twin-engine executive transport which Southern Aircraft Corp. will have ready for flight test within the next six to eight weeks is reportedly based on the Grumman Widgcon. It will be a landplane, however, instead of an amphibian, and is expected to have good one-engine inoperative performance. All the "big propeller" companies have hopped aboard the reverse-thrust bandwagon; and incidentally, regardless of whether or not the CAA permits the use of reverse thrust for shortening landing field requirements, airlines will find it invaluable as a means of leaving engines running and still protecting enplaning and deplaning passengers from the prop blast at intermediate stops.

Next big step in the simplification of flying will probably be the tying in of automatic pilots to navigational aids to provide semi-automatic flight. It may play an important part in determining just which type of navigational and instrument landing system is finally adopted.

SYDNEY CARTER.



Loran Coverage—Any aircraft or surface vessel equipped with a suitable receiver and charts should be able to pin-point itself almost instantaneously with 5-10 mile accuracy within the shaded area on the map at right, according to proponents of the LORAN system of long range navigation. This shaded section represents present Army-Navy LORAN coverage of the North Atlantic. At left, is an hyperbolic chart similar to those on which the LORAN navigator plots his position as indicated by blips on his receiver. Both the chart and the coverage map were prepared for AMERICAN AVIATION by D. Davidson, Massachusetts Institute of Technology Radionics Laboratory, who supplied the material for the story on LORAN in the Dec. 1 issue.

AIA Favors International Airworthiness Standards

Policy Approved At Los Angeles Meeting

THE Board of Governors of Aircraft Industries Association at its recent meeting in Los Angeles endorsed the setting up of basic international airworthiness standards, based solely on safety considerations and applied only to scheduled passenger and/or cargo aircraft.

The statement of policy on international airworthiness approved by the AIA board involved (a) encouragement of mutual cooperation between nations, (b) respect for the rights of all nations, (c) development of international air transportation, and (d) broad vision for future development.

In addition to the international airworthiness standards, the board recommended that transport aircraft certificated by the country of origin as having met that country's airworthiness requirements and the minimum international standards should be eligible for international operations.

In the belief that such certification should be sufficient to qualify these aircraft for export and import purposes between signatory countries, the board recommended that the State Department immediately re-examine existing import-export agreements with a view toward eliminating all special airworthiness requirements which now form part of these agreements.

In other actions, the board:

(1) Approved the report of the national Aircraft Show Committee which recommended that AIA sponsor two national aircraft shows a year, starting in the fall of 1946, one in the East and one in the West.

(2) Referred back to individual member companies a proposed export advertising and sales promotion program.

(3) Approved decision of the Eastern Companies to abolish the New York office as an economy measure. Eastern Company meetings hereafter will be coordinated by the Washington office.

(4) Left determination of next year's financial program to a special committee composed of LaMotte T. Cohn, new AIA president and chairman of Northrop Aircraft; Harry Woodhead, president of Consolidated Vultee Aircraft; E. E. Wilson, vice chairman of United Aircraft and new chairman of the AIA board; Alfred Marchev, president of Republic Aviation; and W. T. Piper, president of Piper Aircraft.

Reconversion at Beech Plant Is Completed

Beech Aircraft Corp. announced last fortnight that it has completed reconversion of its Wichita plant and that orders for commercial aircraft totalling millions of dollars are being delivered to more than 12 companies. The D18S executive transport is now being turned out on a two-a-day basis and deliveries have been made already to Byron Jackson Corp., Continental Can Co. and Mead Corp.

Innovations in the postwar D18S, the announcement said, include a redesigned landing gear, extension of engine nacelles, flush riveting, a redesigned cabin interior and a new instrument panel.

Work is now in progress on feeder air-

line version of the Model 18 and on alternate power plant installations using Continental engines. Production planning is also underway for the five place Model 17 biplane.

Current Beech employment is 3,800 with increases expected in the near future as production of additional models gets underway.

AIA Forecasts Plane Production for '46 Of About 3/4 Billion

Aircraft production ranging between \$600,000,000 and \$750,000,000 is forecast by the Aircraft Industries Association for 1946, compared with a 1945 volume valued at \$8,320,000,000. The 1946 estimates include approximately \$500,000,000 in military orders, \$125,000,000 in commercial transports, and \$100,000,000 in personal aircraft production.

U. S. aircraft manufacturing, AIA declared, has shrunk from its wartime position as the largest industry in the world to a position of 15th or 16th in this country. Bulk of its present work consists of continuing production of half-a-dozen specialized military types which will continue through the new year, scheduled for production at a rate of less than 200 planes a month.

The immediate commercial job, AIA pointed out, is largely the reconversion of military transport planes into airline transports, plus the production of civil transport types just entering production as the war ended. Prospects are that approximately 1,000 such craft, all pre-war airline designs produced for the Army and Navy transport services, will be converted through the coming summer.

According to the AIA, manufacturers of personal planes will enter the new year with a backlog of 50,000 orders on the books, or double the total number of personal planes in existence in 1941. With reconversion from their wartime activity proceeding rapidly in all cases and already completed in several, it is expected that personal aircraft manufacturers will exceed 30,000 units during 1946. Peak peacetime production (1941) was 6,597.

Industry employment is not expected by AIA to increase greatly in the year ahead and best estimates are that it will not exceed 200,000, some 50,000 more than the present total.

Weaver, Assistant to Douglas, Resigns After Twenty Years

John D. Weaver, since 1944 technical assistant to Donald W. Douglas, has resigned from Douglas Aircraft Co. to enter private business in the manufacture of food machinery.

Weaver, who started with Douglas 20 years ago, became manager of the company's \$33,000,000 Chicago factory and previously was manager of Douglas' Oklahoma City plant, supervising plans for its construction and manufacture of bomber components.

Eastern to Get First 'Gold Plate' Constellations

Lockheed Aircraft Corp. will complete the transition from the current interim model to the "Gold Plate" Constellation for delivery to Eastern Air Lines. Eastern has ordered 20 Constellations. Through beefing up the wings and other structural changes, the new aircraft named "the Gold Plate job" by employees working on it, will gross 100,000 pounds. It will have additional gas capacity and a number of cabin refinements, including air conditioning with the air expansion turbine system developed in cooperation with the AIA Research Manufacturing Co. Engines will be Wright 3350's developing 2200 horsepower each.

In flight tests conducted in the recent time of only 27 hours, the Civil Aeronautics Administration approved an increase in the gross weight of the Constellation to 90,000 pounds and certificated the four-engined ship to operate in and out of an airport now served by standard twin-engined transports.



Hopkins

Grubbs

Tuttle

J. O. Cornette has been named controller for the San Diego division of Consolidated Vultee Aircraft Corp., succeeding C. C. Bishop, who has resigned. Cornette formerly was assistant to V. C. Schlemmer, company controller. D. C. Wilkins, Jr. has been appointed chief of industrial relations of the San Diego division. Wilkins formerly was head of industrial relations at the Vultee Field division in Downey, Calif.

Charles J. De Bever has resigned as parachute specialist of the Civil Aeronautics Administration to become a sales supervisor of General Textile Mills, Inc., makers of the non-oscillating "baseball" parachute.

Macdonald Goodwin, formerly assistant general sales manager of Taylorcraft Aviation Corp., has joined Harrington Air Service, Inc., as general sales manager. Harrington operates the new two million dollar airport at Mansfield, O., and has a sales and service center at Cleveland Airport.

Donald S. Grubbs, formerly an audit supervisor with the United States Steel Corp., has been appointed treasurer of the Luscombe Airplane Corp.

H. A. Hershfield, Jr., formerly director of public relations of Ranger Aircraft Engines Division, Fairchild Engine & Airplane Corp., has joined Bellanca Aircraft Corp. as sales manager.

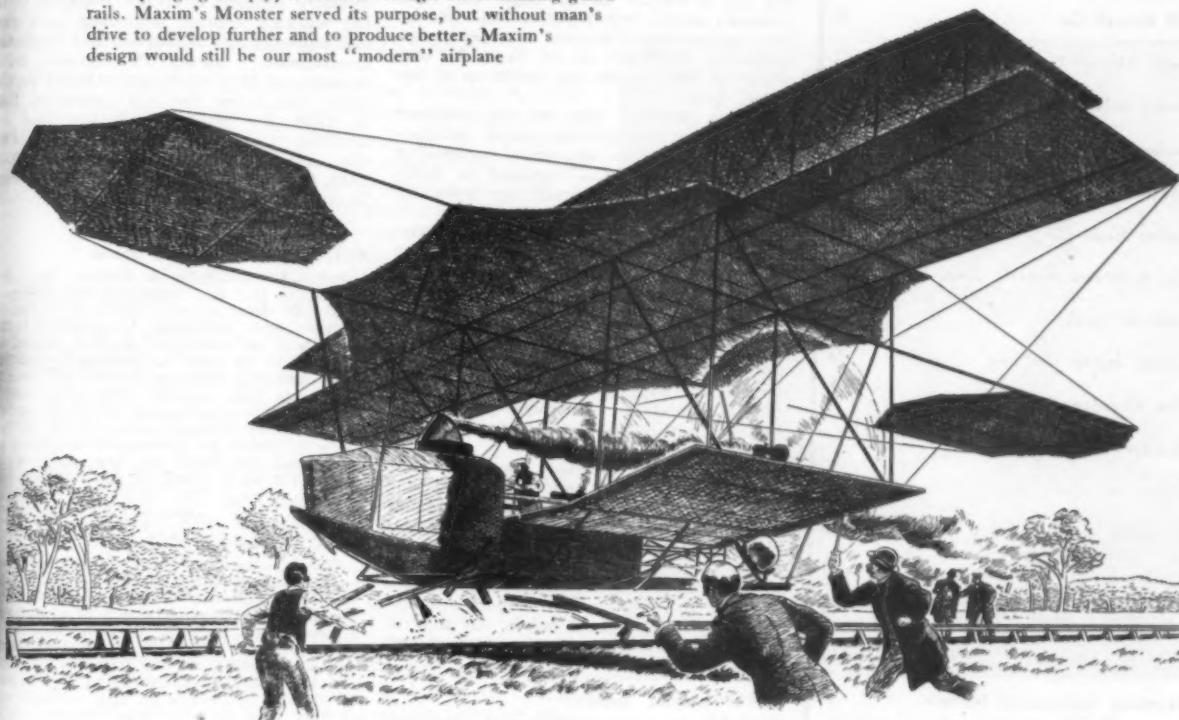
Richard H. Bailey, who has been public relations director for Fairchild Camera & Instrument Corp., has joined G. M. Basford Co., New York advertising agency.

W. S. Tuttle, former director of industrial relations for Consolidated Vultee Aircraft Corp., at San Diego, has been appointed permanent chairman of the Southern California Aircraft Industry group.

N. W. Hopkins, director of public relations for Continental Motors Corp., has been appointed advertising director of the company, succeeding the late John L. Wierengo.

How would you like to fly in Hiram Maxim's "Air Leviathan" today?

In 1894, Sir Hiram Maxim tested his four-ton multiplane
(Wing surface: 5,550 sq. ft. — Engine: 300 h. p. — Propellers:
17 ft. 10 in.). Wanting to measure the power of his propellers,
Maxim harnessed the machine to running gear on the ground.
With steam up, the leviathan ran 1000 feet... rose six inches...
then upsurging sharply, it crashed through the restraining guard
rails. Maxim's Monster served its purpose, but without man's
drive to develop further and to produce better, Maxim's
design would still be our most "modern" airplane



In the Black Widow P-61 are many of the latest advancements in aircraft design. Like *retractable ailerons*, a Northrop development whereby big, heavy airplanes can have the maneuverability, fast take-off, and slow landing speed of smaller, lighter aircraft.

The Black Widow is a milepost in design, but only a milepost. Still more revolutionary planes, like the *Northrop Flying Wing*, will soon take to the air to outmode even the most "modern" designs of today.

And this is good. For continually improved aircraft in the hands of peace-loving nations can help forestall aggression in the world. They are *peace*

insurance. They are also *prosperity insurance*, a means of bringing the world closer together in commerce and understanding.

Design leadership, however, is not enough. If we are to grow ever stronger in the air, there must be many men to take hold of new ideas and make them work—men to build these ideas into the better planes of peace. Yes, and men to fly them.

In fact the demands on the aviation industry now are as great and important as ever before. They are a challenge that can only be met by an industry which is strong, virile and independent.



NORTHROP

Creators of the *Black Widow*
P-61 Night Fighter



and the *Flying Wing*



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Cessna Net Income \$505,262

Production Plans Being Rushed on Four Models

CESSNA AIRCRAFT CO., of Wichita, reported net sales of \$20,790,059 as against total costs and expenses of \$20,621,600, leaving a net income of \$505,262 for the fiscal year ended Sept. 30, 1945. Total income for the period was \$21,126,862.

Net worth of the company has increased 12½ times since September, 1939, amounting to \$5,446,729 as of Sept. 30, 1945, Cessna's annual report points out. Working capital has likewise increased, aggregating \$4,667,239 as of Sept. 30 last, which is 18% of the net worth as of the same date.

Cessna reported that its war contract termination was moving ahead satisfactorily, and that the necessary engineering and tooling programs required to bring out a new line of aircraft are going on at the fastest possible rate.

"It is the present intention to concentrate the efforts of the company in the personal airplane field in which the company was engaged prior to the war," the annual report states.

"The present plans provide for the production of a line of airplanes ranging from light two-place to a luxurious four-place, with the line including four different models. All these planes will be of single engine type and will be of metal construction.

"The present program provides that production will start next spring and that production on all models will be attained by late summer."

The report's balance sheet listed total current assets of \$10,430,138 for the fiscal period, vs. total current liabilities of \$5,762,899. In outlining the company's financial policy, the report points out that in meeting demands for war production and

its attendant expansion, Cessna has financed its own needs for capital through commercial or government guaranteed bank loans and has not relied at any time on direct government financing through advances or partial payments or through furnishing of government-owned facilities, with minor exceptions.

Industry's Wartime Expansion Increased Net Capital 701%

The wartime expansion of the aircraft industry brought a 701.6% increase in its net working capital, according to a survey made by the Securities and Exchange Commission. Basing its figures on a roundup of 23 aircraft and aircraft equipment companies, the SEC reported that, in 1939, the aircraft industry had net working capital of \$61,000,000. In 1941, this rose to \$164,000,000; \$424,000,000 in 1943; \$406,000,000 in 1944; and, up to June 30, 1945, \$489,000,000.

Parks Registers Common Shares

Parks Aircraft Sales & Service, Inc., East St. Louis, Ill., has registered 457,020 shares of \$1 par value common stock with the Securities and Exchange Commission. The stock will be offered at \$3.27 a share, the proceeds to be used to finance further development of a sales and service business for a personal type aircraft. The stock will be first offered to stockholders of record, excepting Parks Air College, on the basis of three for one. Parks Air College stockholders will be offered the stock on the basis of 1.33 shares for each share of Air College stock owned.

AVCO Dividend on Preferred

The Aviation Corp. will pay the first regular quarterly dividend of 56¼ cents per share on the corporation's new cumulative convertible preferred stock Feb. 1 to stockholders of record Jan. 15, 1946. Dividend rate of the new preferred stock is \$2.25 per annum, payable quarterly on the first day of February, May, August and November. A dividend of 10 cents per share on the common stock of The Aviation Corp. was declared on October 19, payable Dec. 20 to stockholders of record Nov. 28.

Analysis on Piper

An analysis of the present position and future prospects of the Piper Aircraft Corp. has been prepared for distribution by Sulzbacher, Granger & Co., 111 Broadway, N. Y. C., members of the N. Y. Stock Exchange.

Classified Advertising

FEEDER AIRLINE APPLICANTS. Experienced man who has built three extensive exhibits showing Public Convenience and Necessity, operational plan, cost details, etc., for presentation to proper Governmental agency, available with qualified assistance to build cases for feeder applicants in certain areas of nation. Can furnish sample exhibits of work which speak for themselves. Write Box 457, American Aviation, American Building, Washington 4, D. C.

WANTED a pilot with some air line pilot experience to represent a well-established employee-representing organization. This is not a flying position. Executive work only with some travel. Employer-employee relations handling ability necessary. Veteran preferred. Box 449, American Aviation, American Building, Washington 4, D. C.

WATCHES WANTED—Broken or usable. All kinds, even Ingersolls. Highest prices paid for jewelry, rings, spectacles, gold teeth, etc. Cash mailed promptly. Write for free shipping container. Lowe's, Holland Bldg., St. Louis 1, Mo.

AIRLINE CAPTAIN, Age 34. Eight years with airlines, including two years trans-ocean flying with Air Transport Command, 8500 hours twin and four-engine time, graduate of Army Flying School, College Graduate-Accounting and Business Administration, qualified navigator. Desires administrative position with or without flying. Box 466, American Aviation, American Building, Wash. 4, D. C.